Department of Defense Corporate Information Management (CIM)
Presentation to Staffers for Senator John Glenn, October 7, 1993

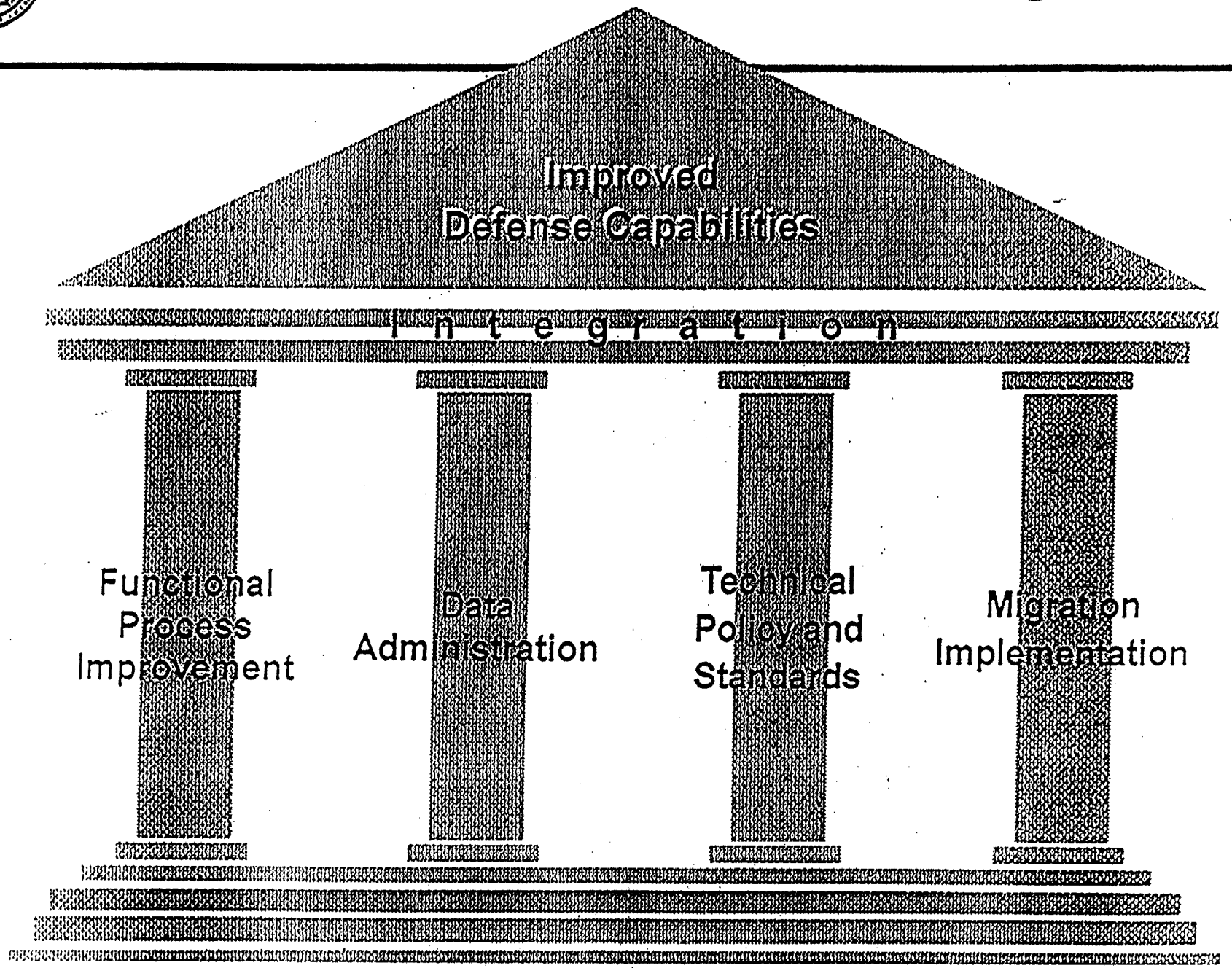
Corporate Information Management

I. CIM Overview	C. Kendall, Deputy Assistant Secretary of Defense (Information Management), OASD(C3I)
II. Reviews and Studies A. GAO B. National Performance Review C. Congressional Recommendations and Direction D. Odeen Panel E. OMB	C. Kendall
III. CIM Policy, Roles, and Organizations	C. Kendall
IV. Functional Process Improvement Tools, Techniques, and Programs	M. Yoemans, Director for Business Process Redesign, ODASD(IM)
V. CIM Applications in Materiel and Logistics	D. Erwin, Director for Materiel & Logistics Functional Information Management (FIM), ODASD(IM)
VI. CIM Applications in Financial Management	S. Rogers, FIM for Finance and Acounting, ODASD(IM)
VII. CIM Applications in C3I	J. Graves, Director for C3I FIM, ODASD(IM)
VIII. Barriers and Lessons Learned	M. Yoemans
IX. Data Administration	B. Leong-Hong, Acting Director, Center for Information Management, Defense Information Systems Agency (DISA)
X. Information Technology	T. Bozek, Assistant Director for Information Technology, ODASD(IM)
XI. Migration Systems Requirements	C. Kendall
XII. Integration and Interoperability	M. Mestrovich, Director, Center for Integration and Interoperability, DISA
XIII. Recap of CIM Initiative	C. Kendall

Other Topics

XIV. Defense Information Infrastructure	R. Oxley, Director for Information Technology Resources, ODASD(Plans and Resources), OASD(C3I)
XV. Information Technology Budget	C. Kendall

Corporate Information Management



DoD Corporate Information Management

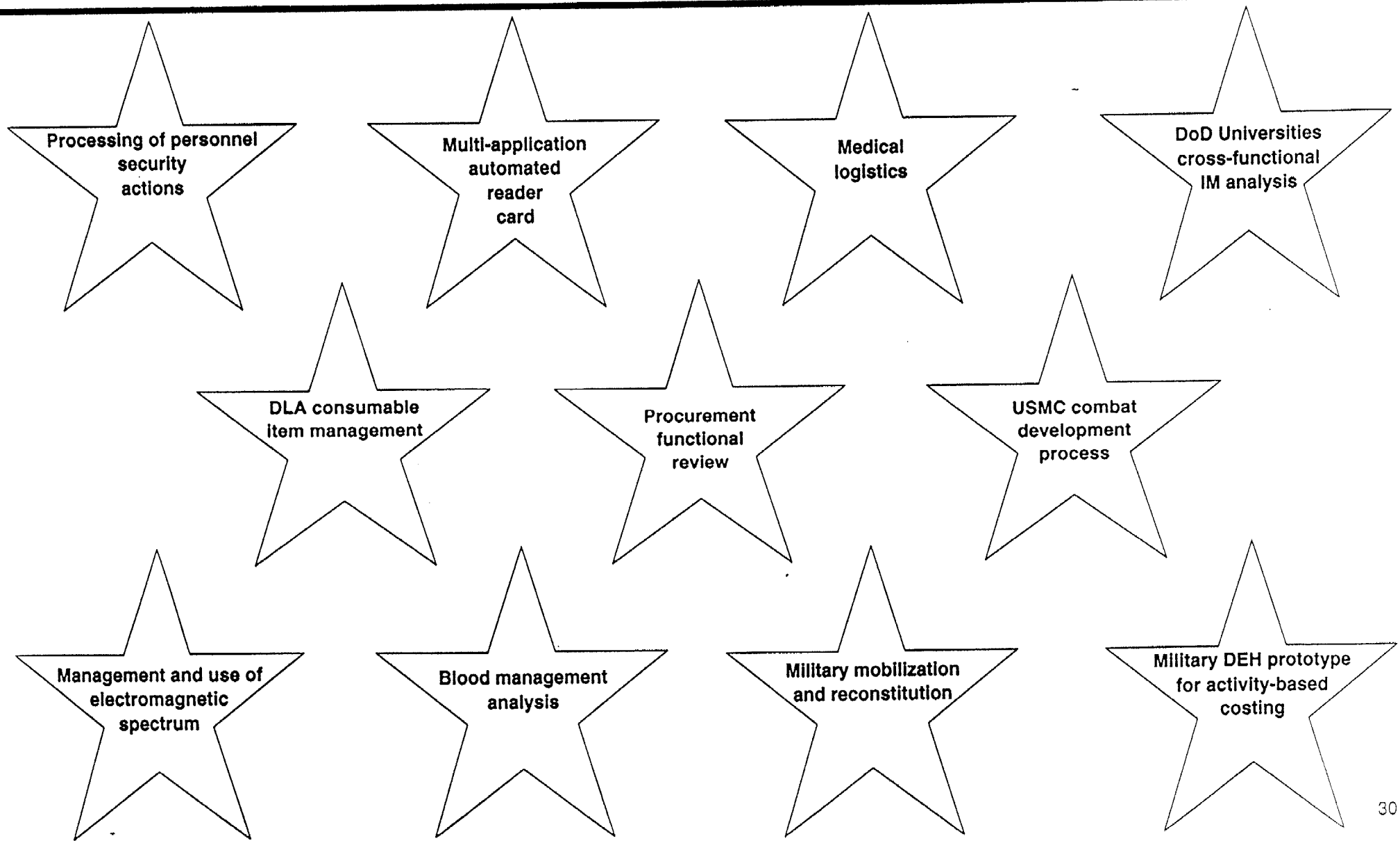
- The key objective of CIM is *Functional Process Improvement*.

- The role of information technology is *supportive* and allows the adoption of *more efficient and effective functional area performance and management*.

Status of Business Process Re-engineering Support (BPR)

- 130 Projects with lessons learned undertaken
- Implemented a fully functioning BPR Center and Support Capability
- Institutionalized the concept of Business Process Re-engineering/Process Improvement through a DepSecDef Memo May 7, 1993
- Full briefing to Dr. Perry dealing with management issues and barriers to BPR scheduled for November 10

DoD bright spots



DoD Corporate Information Management

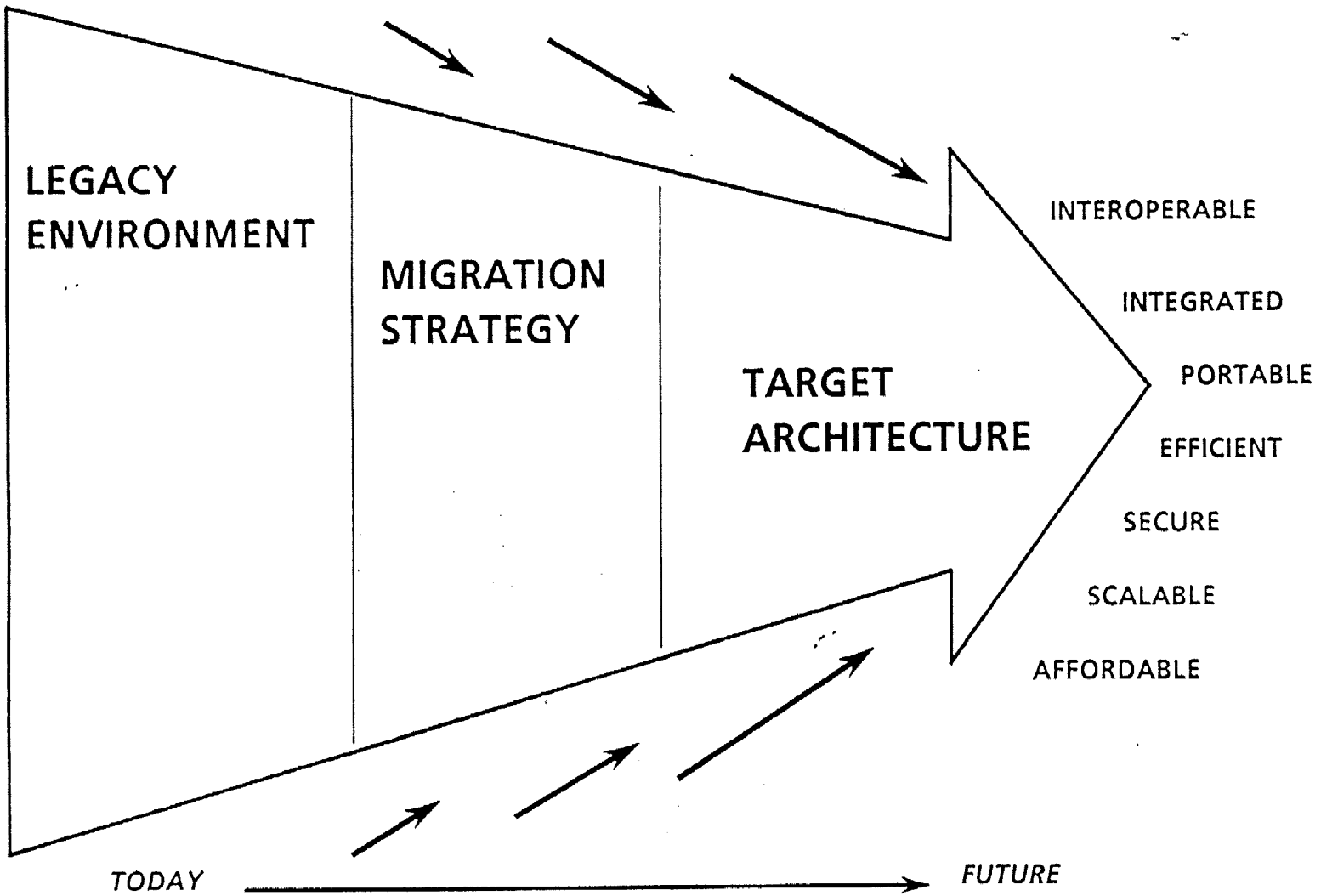
Data Administration

- Data: The linkage of DoD functions, organizations and systems
- Data administration: Effective use of quality, sharable data for mission performance and interoperability
- Reduce or eliminate costly rework:
  - Enter data once, use it often.
  - Standardize meanings and formats.
  - Reduce number of data elements.

DoD Corporate Information Management
Technical Policy and Standards

- Technical Architecture Framework for Information Management
- Promote rapid evolution if IT standards
- More commercial off-the-shelf Items
- Requirement for Ada in developed software
- More frequent, smaller ID/IQ contracts
- Information Security is vital

DoD Corporate Information Management Migration Implementation



DoD Corporate Information Management

New Administration Support

- **Deputy Secretary of Defense, May 7, 1993:**

  "We are fully committed to the improvements, efficiencies and productivity that are the essence of CIM. Business or Functional Process Reviews and improvements will be institutionalized throughout the DoD.

- **Assistant Secretary of Defense (C3I), August 16, 1993:**

  "If I were President, I would say 'Thou shalt, thou will use CIM.'"

- **Others**

GAO Concerns about CIM
Cited in Senator Glenn's Letter to Secretary Aspin
August 9, 1993

1. "Top Management support for CIM within the Office of the Secretary of Defense (OSD) and the military components appears to be uncertain."

DoD Response: Deputy Secretary of Defense Perry memorandum, May 7, 1993, states that "We are fully committed to the improvements, efficiencies and productivity that are the essence of CIM."

2. "The current focus of CIM seems to be directed at systems improvement, often with little or no Department-wide consultation or coordination, let alone any significant attention to re-engineering the business processes the systems are supposed to support.

DoD Response: Over 100 process re-engineering projects are underway. DoD is also reducing the number of duplicative, redundant, and Service-unique systems in operation, since each systems incurs substantial maintenance and support costs. DoD can achieve near-term savings in reducing legacy systems while preparing for additional functional cost reductions through process re-engineering. This is in keeping with the April 1991GAO recommendation that DoD select interim standard systems, using sound evaluation criteria, to achieve near-term savings.

3. "The Department does not appear to be properly organized to implement CIM. Roles and responsibilities within OSD and between OSD and the military components are unclear."

DoD Response: DoD Directive 8000.1, "Defense Information Management Program," October 27, 1992 spells out roles and responsibilities for OSD and Defense Components. Each OSD Principal Staff Assistant is responsible for implementation of CIM within their functional area. This includes organizational structures, functional economic analyses, and implementation of functional process improvements.

4. "Funding controls and oversight mechanisms are not in place to ensure that the right projects receive money. As a result, the military services and Defense agencies have been able to continue to spend money on projects that support unique rather than Department-wide goals, even while claiming to be operating under the auspices of CIM."

DoD Response: While DoD is reducing it number of duplicative and redundant legacy systems, current operations must continue until operations can be moved to standard "migration" systems. DoD has management mechanisms in place to phase out legacy systems.

GAO - you've done a good job lining up support
form vs. substance -
look at DFAS + JLSC -
- a lot of confusion + misdirection
- felt lack of confusion re: guidance
from

CK: It's not my role to tell them how to
do their job; we provide them w/ tools +
If you think there's something I can do, tell us
we can't

P: Are you producing info to show
savings?

CK: We often show info & focus on
investment

P: DoD made claim on savings
but what you're hearing is what
has been produced

CK: fewer systems; savings in IT is small
tracking in DMRDs; we exceeded

Stoffer / Comprehensive updated plan? or fragmented.
Jan 1991 -
another plan this December

mgt savings in C I

Plocher Problem is same as in NPR.
Gramm was going to offer amendment to
lock in
CIM - a single initiative ^(earlier) but you're
breaking out the pieces +

Mil / FEA to trade

CIM Action Items

Implementation Plan

An overall strategy for the CIM initiative is being developed.

- January 1991 Implementation Plan largely covered start-up activities and first 24 months of CIM implementation. It has been completed.

- An overall strategy to address follow-on activities of the CIM initiative is planned for December 1993.

Resources for CIM and Process Re-engineering

Investments are being made in functional process improvements identified through the CIM initiative. These investments must be consistent with CIM priorities for business process re-engineering, migration systems and data administration.

- Use of the FY 1994 CIM Central Fund is determined by collaborative efforts of all OSD Principal Staff Assistants. This balances needs and priorities across functional areas.

Application System Migrations

DoD is paring down its number of automated information systems. The ASD(C3I) is speeding up the identification of migration systems and the elimination of duplicative legacy systems.

Data Administration

Speed-up of the data standardization process is a high priority. DoD will leverage standardization work done previously by DoD Components and streamline standardization procedures.

Enterprise Integration

The ASD(C3I) is emphasizing integration of CIM efforts across DoD as a single enterprise.

- Systems must be joint and interoperable.

- Magnitude of DoD effort is the equivalent of all civil agencies combined.

Extracts from Vice President Al Gore's
Red Tape to Results:
Creating a Government that Works Better and Costs Less
Report of the National Performance Review, September 7, 1993

"the computer revolution allows us to do things faster and more cheaply than we ever have before"

The Root Problem: Industrial Era Bureaucracies in an Information Age

> "By its nature, innovation requires a departure from standard operating procedure. In the federal government, such departures invite repercussions."

The Solution: Creating Entrepreneurial Organizations

> Cites use of a standard Air Force information system "to strip away red tape and redesign work processes"

"The movement to reinvent government is as bipartisan as it is widespread. It is driven not by political ideology, but by absolute necessity. . . .We will reengineer the work of government agencies. . .We will expand the use of new technologies. With computers and telecommunications, we need not do things as we have in the past. We can design a customer-driven electronic government that operates in ways that, 10 years ago, the most visionary planner could not have imagined."

"As the Industrial Era has given way to the Information Age, institutions -- both public and private -- have come face to face with obsolescence. The past decade has witnessed profound restructuring. In the 1980s, major American corporations reinvented themselves; in the 1990s, governments are struggling to do the same."

"The Defense Department is [an] agency in which necessity is becoming the mother of invention. Facing a swiftly falling budget, the department literally can't afford to do things in its usual way."

"Good information comes from good information systems. Management information systems have improved in lockstep with every advance in the telecommunications revolution. New management information systems are transforming government, just as they have business, in two ways. They can make government more productive. . .and let us deliver services to customers in new ways."

Action:

Federal agencies will expand their use of electronic government.

"Opportunities abound for cutting operating costs by using telecommunications technologies."

Action:

The administration will develop a strategic plan for using information technology throughout the federal government.

"Transforming the federal government is an enormous, complex undertaking that begins with leadership, not technology. Yet, in helping to break down organizational boundaries and speed service delivery, information technology can be a powerful tool for reinvention. To use that tool, government employees must have a clear vision of its benefits and a commitment to its use.

"Washington's attempts to integrate information technology into the business of government have produced some successes but many costly failures. Many federal executives continue to overlook information technology's strategic role in reengineering agency practices. Agency information resource management plans aren't integrated, and their managers often aren't brought into the top realm of agency decisionmaking. Modernization programs tend to degenerate into loose collections of independent systems solving unique problems. Or they simply automate, instead of improve, how we do business.

"The President should expand the work of the existing Information Infrastructure Task Force to include a Government Information Technology Services Working Group. This working group will develop a strategic vision for using government information services and propose strategies to improve information resource management. Also beginning October 1993, OMB will convene interagency teams to share information and solve common information technology problems. In addition, OMB will work with each agency to develop strategic plans and performance measures that tie technology use to the agency's mission and budget.

FY 1994
Congressional Concerns

Senate Appropriations Committee

"With the change in administration, the Committee hopes to see the strong leadership that will be necessary to make the difficult decisions that have thus far prevented the Department from making any significant progress in these areas":

- "to create standards,
- [to] integrate systems,
- to adopt a fee-for-service policy and customer/supplier relationship, and
- to have a single organization responsible for technical improvements in information management."

House Appropriations Committee

"DoD must move carefully in eliminating information systems and associated development, operations, maintenance and procurements, to make sure that the remaining systems can carry the full workload and satisfy the needs of all components of the DoD. While the Committee continues to support the CIM initiative, it believes that tighter controls need to be implemented to achieve projected savings. . .The Committee would like to give the new Administration time in establishing its automation policies."

House Armed Services Committee

The Committee observes "uncertainty and ambivalence over the move toward centralization versus the need to retain functions with the armed services."

"The department's effort should be more closely aligned with the national information technology initiative."

Committee / FM –

DMRD savings not tracked anymore
Staffers: Why not? (we don't track
– budget baseline –

* This will be an issue!

GAO: Basis accountability –
make estimates for savings & not acct for it!

Underpinning / foundation in field are going in various directions –

dichotomy

FEA –
a wrong document
major problem – we don't have acctg data want to do this –

We would like to know what it costs to do business, we know what we spend –

Mentioning Activity Based Costing

That's philosophy we're using

We need to do a better job

NPR Office

Odeen Panel and OMB

Odeen Panel

- Did not question prior years' savings from initiatives; concerns were focused on out-year savings
- Found considerable support for CIM at the conceptual level
- Found Servie opposition to centralizing development of common information systems within an expanded DISA

Office of Management and Budget

- CIM designated as a Priority Program in 1991
- Focus of OMB reviews has shifted from CIM overall management structure to the application of CIM principles in each Defense functional area.
- Notes management challenge of process improvements while downsizing

DoD Corporate Information Management Organizations

- Deputy Assistant Secretary of Defense (Information Management)
- Defense Group Meetings, Defense Information Systems Council, CIM Functional Integration Board
- Defense Information Systems Agency
- Data Administration Council
- Functional Steering Committees

Defense Corporate Information Management
Key Information Management Policies

- DoD Directive 5137.1, "Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD(C3I))," February 12, 1992 establishes the ASD(C3I) as the Office of the Secretary of Defense (OSD) Principal Staff Assistant for Information Management (IM) and the Senior DoD IM Official pursuant to Section 3506(b) of 44 U.S.C. The Directive tasks the ASD(C3I) with implementation and oversight of the Defense IM program, the Defense corporate IM (CIM) initiative, and the principles of corporate IM throughout the Department of Defense.

- DoD Directive 8000.1, "The Defense Information Management (IM) Program," October 27, 1992 is the capstone IM Directive. It integrates existing DoD Information Resources Management (IRM) activities with those of the CIM initiative into a DoD IM Program and provides a new IM framework for the life-cycle management of DoD information. Policies of note include the principles that data and information are DoD corporate assets whose creation and availability shall be determined by functional mission requirements; the OSD Principal Staff Assistants (PSAs) and the Chairman of the Joint Chiefs of Staff have the authority and responsibility to streamline and simplify the functional processes of the Department; and changes to functional processes and information shall be based on sound business principles supported by DoD-approved analyses. The Directive sets forth specific roles and responsibilities of OSD PSAs and the DoD Components.

- DoD Instruction 8020.1, "Functional Process Improvement," is completing formal coordination and being prepared for ASD(C3I) signature. This instruction defines the overall Defense functional management and functional improvement process. This will allow the OSD Principal Staff Assistants, the Chairman of the Joint Chiefs of Staff and the Components to conduct functional process improvement in a consistent, shareable manner.

- Draft DoD Manual 8020.1-M, "Functional Process Improvement," was issued by OASD(C3I) memorandum "Interim Management Guidance on Functional Process Improvement" on August 5, 1992, and updated by OASD(C3I) memorandum on January 15, 1993. This manual defines the iterative process by which OSD Principal Staff Assistants, the Chairman of the Joint Chiefs of Staff and Components continuously evaluate and improve their functional processes, data requirements and supporting information systems. It describes a structured methodology for development and implementation of streamlined and standardized alternatives to current processes, data and systems.

- DoD Directive 8120.1, "Life Cycle Management of Automated Information Systems (AISs)," January 14, 1993, replaces DoD Directive 7920.1, and updates the processes for managing an AIS during its life-cycle with special emphasis on early decisions that can reduce costs and increase systems utility. It integrates Life-Cycle Management of AISs into the Defense IM Program. The updated directive endorses evolutionary and incremental systems development strategies and the use of rapid prototyping. The directive also supports use of nondevelopmental, commercial off-the-shelf hardware, software, and systems.

- DoD Instruction 8120.2 "Automated Information Systems (AISs) Life-Cycle Management Review and Approval Milestone Procedures," January 14, 1993 replaces DoD Instruction 7920.2. This instruction and its accompanying manual lay out policies and procedures for the MAISRC process and state that DoD shall use LCM review and milestone approval procedures to ensure that all AIS expenditure-related decisions are based on the total anticipated benefitsq that will be derived over the life of the AIS.

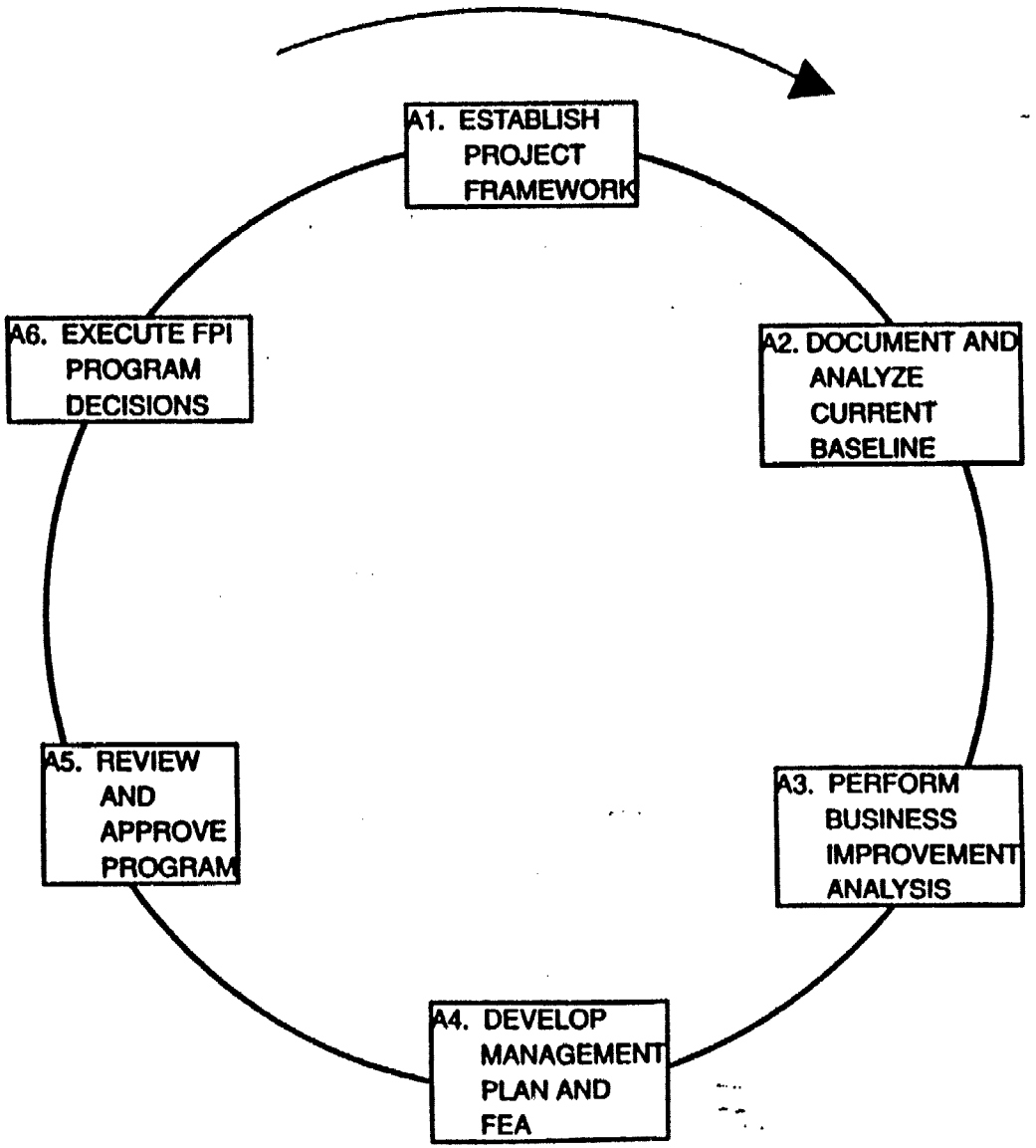
- DoD Directive 8320.1, "Data Administration," September 26, 1991, establishes policies and assigns responsibilities for DoD Data Administration to plan, manage and regulate data within the Department. The program's goal is to ensure data within the Department is consistent in format and definition. This will eliminate costly duplication of effort and rework in translating data from one format to another. QThe program will increase accuracy and consistency of information to Defense decision makers.

- DoD 8320.1-M-1, "Data Element Standardization Procedures," January 15, 1993 provides detailed procedures for creating DoD standard data elements. It facilitates the creation of clear concise, consistent, unambiguous, and easily accessible data DoD-wide to meet data sharing and interoperability requirements throughout the Department.

Status of Business Process Re-engineering Support

Office of the Assistant Secretary of Defense for Command, Control, Communications and Intelligense (C3I)

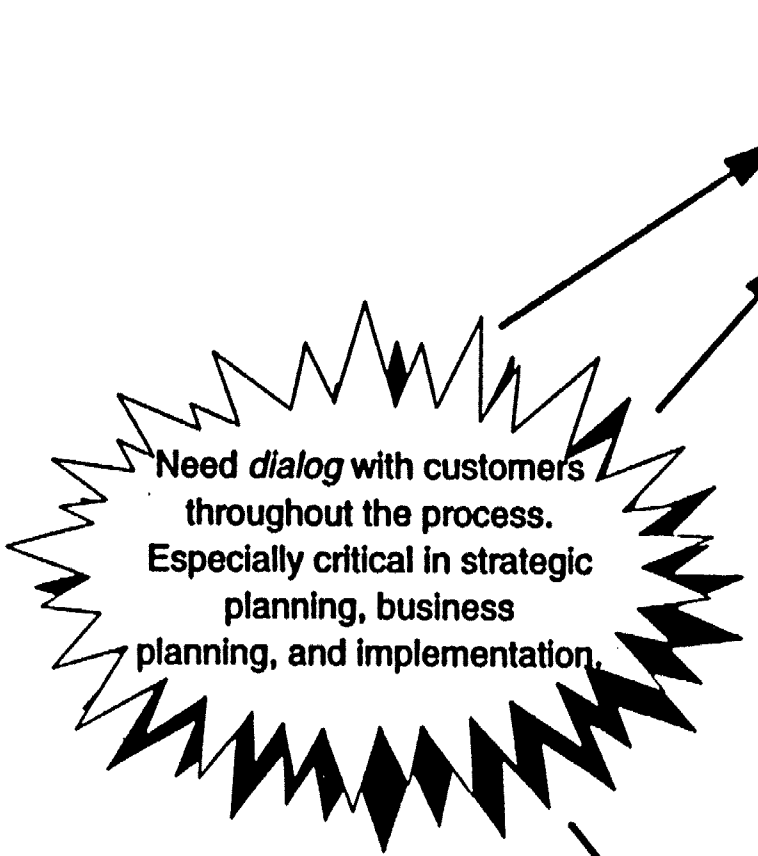
Continuous process improvement



Focus on customers and their requirements throughout!

Multiple tools available to support each step!

A menu of techniques



Strategic Planning Techniques

Get customer needs from customers
Set mission-vision-goals
Benchmark enterprise goals

Business Planning Techniques

With customers, identify performance measures and product/service features

Process Design Techniques

* Baseline modeling
Process flow analysis
Value-chain analysis
* Activity-based costing
Statistical quality measures
Benchmarking

Process Analysis Techniques

* Improvement analysis
Simulation
Best practice analysis
* To-be modeling
* Functional economic analysis
Functional integration

Information Engineering

Implementation

Project management
Quality control
Management analysis

Prerequisites for Functional Process Improvement

*** Essential elements**

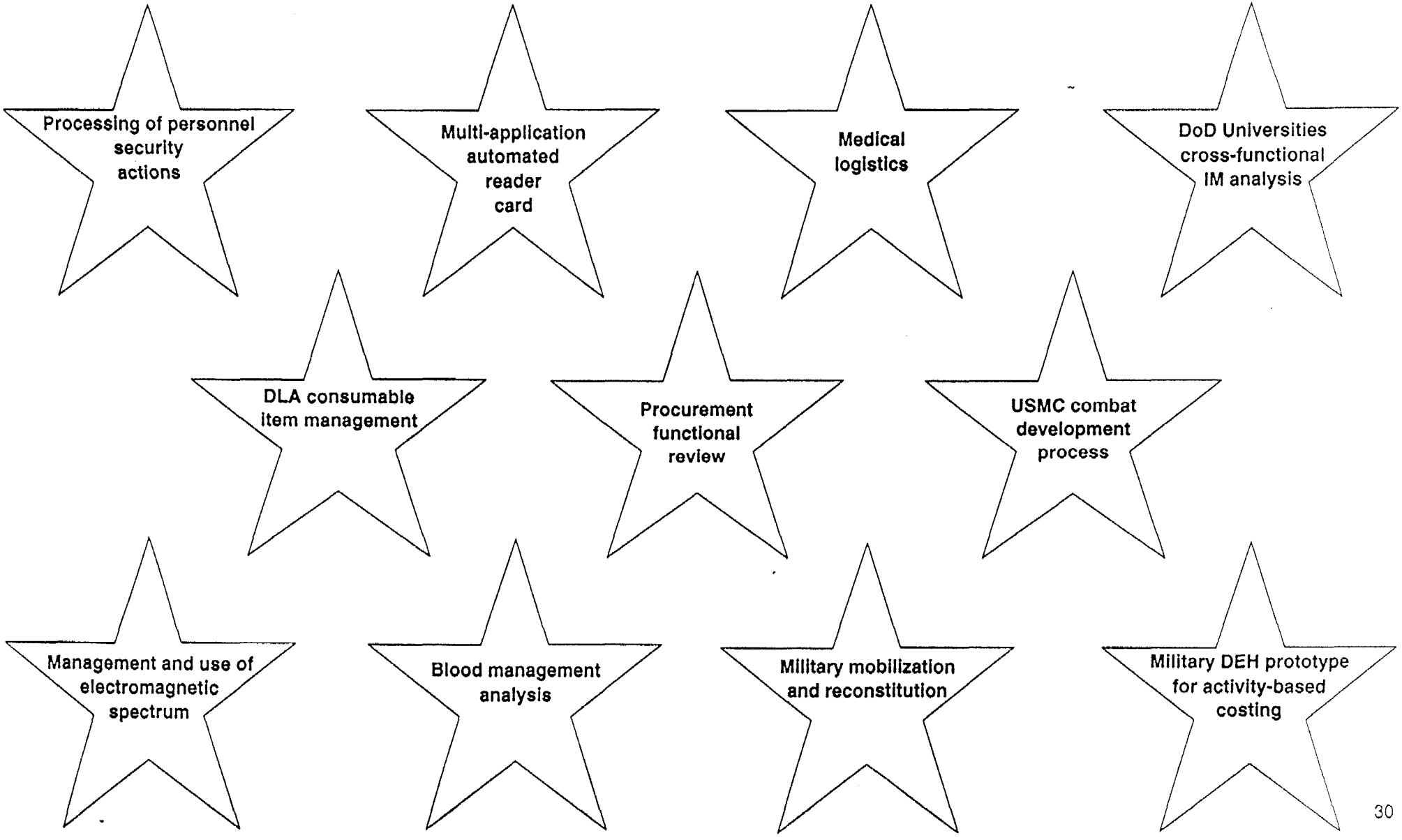
Status of Business Process Re-engineering Support (BPR)

- Simple six step methodology developed through industry, government and academic partnership. Now widely accepted and used.
- Strategic Plan, Policy, Guidebooks, Management Framework developed to guide and institutionalize program
- Wide variety of off-the-shelf tools and techniques in use
- Evaluated program against best in industry and developed a functional economic analysis (FEA) on our own process
- Functional Center of Expertise established at the Defense Information Systems Agency (DISA)
- Aggressive training program utilizing existing off-the-shelf courses and training institutions, to include industry. Over 8000 have completed training in various BPR tasks

Status of Business Process Re-engineering Support (BPR)

- Developed a Federal Information Processing Standard (FIPS) for the Integrated Definition (IDEF) methodology in activity and data modeling in cooperation with business and industry groups. Awaiting signature of the Secretary of Commerce
- Extensive work with industry and academia to establish and link groupware solutions
- 130 projects with lessons learned undertaken.
- Developed and fielded a model repository to aid in storage, analysis and reuse of models created through BPR projects.
- Established help/hot line (1-800-TELL-CIM) and CD-ROM program support disk (25 critical reuse documents plus functional economic analysis software)

DoD bright spots



TITLE: DoD Enterprise Model

FUNCTIONAL AREA: Cross Functional

FUNCTIONAL PROPONENT: Assistant Secretary of Defense (C3I)

PROJECT PERFORMANCE PERIOD: October 1992 - Ongoing

DESCRIPTION: The Department of Defense is a major corporate enterprise so large it dwarfs many of the national economies around the world. It consists of multiple functional processes executed by hundreds of operating agencies around the world. The Corporate Information Management initiative within the Department is focused on parallel efforts to enhance integrated operations and shared data while simultaneously streamlining on-going functional operations. To achieve the Department's critical objectives, all elements of the Department must be able to hold a shared view of the major processes of the "Defense Enterprise" and the essential shared data needed to provide critical operational and management information.

To meet this need, the Department of Defense Enterprise Model was developed. It is rooted in much of the previous analytical work of the Military Departments and the Defense Agencies and incorporates all major processes of the Department. Essentially, they fall into four major categories:

Establish Direction
Acquire Assets
Provide Capabilities
Employ Forces

The model decomposes these processes into two lower layers and provides the template against which both functional processes and organizational missions can be reviewed. It also provides the overall strategic data model for the department that supports the rapid standardization of key data.

The model is now being linked to the fiscal information contained in the Future Years Defense Program to allow senior management to see the resources used in the processes and will also be linked to the performance measures for the Department's general ledger as well as the national security strategies. It is a living document that will continue to be improved and enhanced in the future. Even now, it provides an essential template to support management operations across the department.

POC: Bunnie Smith, OASD(C3I)IM,703-746-7222

Title: DoD Business Process Improvement Program

Functional Area: All Areas **Functional Proponent:** OASD(C3I)

Project Performance Period: January, 1992 - Ongoing

Description: In January 1992, DoD established its Business Process Improvement (BPI) Program to assist functional area managers as they undertake business process improvements to achieve Defense Management Review savings. This DoD program defines and provides business process improvement support services applicable to all functional areas; conducts demonstration projects to prove how business process improvement techniques and methods could be successfully applied in DoD, and; directs development of a comprehensive training program to educate personnel involved in CIM-related implementation tasks.

In 1992, program successes include numerous support services ranging from a 1-800 customer support line and loaner tool library, to guidebooks, brochures, training materials and course offerings. A proposed Federal Information Processing Standard for BPI modeling was initiated. A process improvement simulation capability was made available to projects requiring simulation to test improvement alternatives. A geo-technical architecture tool was made available for use in managing information systems and network assets. The Functional Economic Analysis reporting requirements and guidebook were provided to functional managers to assist in developing a business case and justifying information technology investments.

In 1993, program successes highlights include the BPI Model Repository which will provide functional managers with access to models being developed in BPI initiatives. The repository will promote reuse of existing analysis work, highlight areas where analysis has already been conducted, and facilitate integration within and across functional areas. Groupware Centers, where electronic meeting and modeling software are used together to reduce the time required to conduct BPI analysis, were added to the suite of BPI techniques.

Future program emphasis will be on finding ways to bring down the cost of BPI facilitation and analysis; bringing in more improved techniques, methods, and technologies to perform BPI; developing customer support to meet the many challenges of cross-functional integration; and continuing to develop and provide training materials that effectively address the many areas of BPI.

In June 1993, the DoD program received a nomination in the Government Category of the Smithsonian Institution/Computerworld Annual Award. This award, which was founded four years ago by Computerworld and the Smithsonian Institution's National Museum of American History, recognizes creative uses of information technology that benefit society.

POC: Connie Leonard, OASD(C3I)IM, 703-746-7390

TITLE: Military Directorates of Engineering and Housing (DEH) Prototype of Activity-Based Cost Techniques within DoD

FUNCTIONAL AREA: Information Mgt. **FUNCTIONAL PROPONENT:** ASD(C3I)

PROJECT PERFORMANCE PERIOD: June,1991 - Ongoing

DESCRIPTION: A common problem with potential process improvement opportunities is the ability to accurately determine associated costs. Every activity incurs costs. The collection and analysis of costs, particularly those for processes which do not appear to add value to activity, is vital to creation of practical, achievable and cost-effective alternatives.

US Army installation Directorates of Engineering and Housing (DEH) were chosen for prototyping this technique since there had already been considerable development effort for an Integrated Facilities Management System at a cost to the Army of nearly $300M. The toolset was developed after considerable modeling effort to determine the needs of installation managers and planners. However, it appeared that additional savings could be obtained through further process improvement activities which could also evaluate activity costs.

The objectives of this project are; 1) determine an appropriate method for accurately collecting costs at various levels of complexity in a process; 2) create templates for commercial-off-the-shelf (COTS) software for comparisons of costs; 3) determine the best method for applying collected costs to Information models; and, 4) assure data collected is compatible with and usable by other tools, maximizing reuse of information.

Ft. Eustis, VA and Ft. Sill, OK, were selected as test sites for data collection. Phase I teams collected costs and process information at both installations and mapped it to information models. This phase was completed in May, 1992. It identified 118 improvement opportunities beyond automation requirements already identified. A number of these improvements were immediately implementable, such as those in job estimating, and have already resulted in demonstrated savings.

Phase II, the creation of templates for assignment of costs, is ongoing. The template formats have been created and mapped to models of the major activities. Testing of the templates is currently ongoing. Following completion of the test period and evaluation of results, the templates will be deployed to Army and other DoD installations through the DoD Public Works Centers.

This project has received awards from both the Government Computer News in 1992 for Innovative Technology and A Gold Nugget Award from DoD.

POC: John V. Tieso, OASD(C3I)IM 703-746-7938

BRIEFING ON MATERIEL AND LOGISTICS FUNCTIONAL INFORMATION MANAGEMENT AREA

F. Deane Erwin
October 7, 1993

FUNCTIONAL AREAS
(as of today)

- MATERIEL MANAGEMENT (SUPPLY MGT)
- DISTRIBUTION
- PROCUREMENT
- DEPOT MAINTENANCE
- "LOGISTICS" TRANSPORTATION
- ENVIRONMENTAL
- INSTALLATIONS
- CALS and EC/EDI

Neutral money to do the job

GAO: goes beyond $ +

• Confusion bet. migratory + target systems — can't see path to migr. system, ∴ no goal

10 Absence of policy links is the issue

In some cases we went to target system because there were no migratory system

Army has 5 below wholesale

MATERIEL MANAGEMENT

- WHOLESALE
  - Have Selected Migration System (see Logistics Migration Master plan)
  - Plan to implement at Initial Operating Site (IOS) in January 1995
- "BELOW" WHOLESALE
  - Will develop single requirement for Logistics system
  - Same system used in peacetime and in battlefield
- Service/Agency & Joint Staff (J4) Supported

TITLE: Combat Development Process - USMC

FUNCTIONAL AREA: USMC (Crosses all functional areas)

FUNCTIONAL PROPONENT: ASD/C3I for (CG MCCDC)

PROJECT PERFORMANCE PERIOD: November 92 - Ongoing

DESCRIPTION: The USMC reorganized recently to improve integration of its Combat Development Process (CDP). The CDP contains all activities from development of operations concepts to the fielding and sustaining of Combat-Ready Marine Air-Ground Task Forces (MAGTFs). The Marine Corps CDP touches all organizations of the Marine Corps we well as other service functions needed for joint development and the coordination to ensure interoperability in the joint arena. The Marine Corps focus on combat development as a single process acknowledges the challenge of integrating multi-agency activities and funding sources. The Marine Corps CDP also presents a unique opportunity for broad gauge trade-offs among material, training, doctrine, structure, and support facilities to provide the most cost/effective national defense.

The first objective of the process modeling for the USMC is to assist senior executives and managers nderstanding, communicating, designing and implementing an effective CDP across all organizations. The IDEF modeling meets this objective by providing a picture of the process and by involving the executives and managers at all stages of development and implementation. The second objective is the documentation of requirements for automated information systems within the CDP. The performance measure of importance in this project is the ability of the USMC CDP to produce Combat-Ready MAGTFs that fulfill national security objectives for the USMC at the lowest total cost, including the CDP and its automation costs.

An initial model has been developed which provides a vision of the basic process and scope involved in combat development. Training in the IDEF method was given to the Commanding General, Division Directors and Working Group. Involvement at all levels resulted in a working model which can be used by the USMC for clarification and communications, and to identify roles, responsibilities and resource requirements. CG MCCDC has used the model to clarify process management issues with the Deputy Secretary of Defense and the Commandant.

In response to USMC request, further effort is being planned to provide immediate process improvement incorporated into Standard Operating Procedures (SOP). Specific areas of interest for SOP are Concepts and Plans, Requirements, the POM and C4I. Major future improvements of the overall CDP will be proposed and requirements defined for automated support. Multi-organization executive involvement will be required during this next stage.

POC: Connie Leonard, OASD(C3I)IM, 703-746-7390

TITLE: DoD Universities Information Management Functional Process Improvement Project (FPI)

FUNCTIONAL AREA: Cross-Functional

FUNCTIONAL PROPONENT: DOD COMPTROLLER/ASD(FM&P)

PROJECT PERFORMANCE PERIOD: April 1993 - Ongoing

DESCRIPTION:
The Service Academies continue to be subjected to comparative costing with other commissioning sources (e.g. ROTC, OCS). The pressures to reduce costs for acquiring, educating and commissioning people will undoubtedly continue. The purpose of the DoD Universities FPI Project is to demonstrate to the Congress and Nation that the Service Academies are working diligently to identify cost savings, and other economies, to ensure public funds are well spent. The Corporate Information Management (CIM) initiatives, developed in DoD, have identified candidate functional areas for examination of potential business process improvements.

Business Process Improvement Projects will be conducted at each of the Service Academies in each of the following functional areas: (1) Financial Management, (2) Registrar/Student, (3) Admissions, (4) Alumni/Development, (5) Services/Community, and (6) Facilities. Appropriate Functional Economic Analysis (FEA) will be conducted for each functional area. In addition to looking at the "Business" and "Base Support" functions identified above, related initiatives such as: USAFA Cadet Activities Management Information System (CAMIS), USMA Data Legacy, National Defense University (NDU) High-Level Analysis, Naval Post Graduate School Validation, and Reinventing University projects are being incorporated to provide a thorough analysis.

This is an on-going project. Baseline analysis of the Financial Management area has been conducted at all Academies. Analysis of the other functional areas is underway. Benchmarking analysis with non-DoD universities is an integrated part of the analysis.

Upon completion of the analysis in each of the functional areas, there will be analysis of how best to integrate the functional areas into a complete cross functional system.

POC: Sandy Rogers, OASD(C3I)IM,703-746-7904

TITLE: Medical Logistics CIM Analysis

FUNCTIONAL AREA: Health

FUNCTIONAL PROPONENT: ASD(HA)

PROJECT PERFORMANCE: July 91 - Ongoing

DESCRIPTION: DoD health care costs approximately $9 billion per year. The Services acquire and distribute over $2 billion in medical supplies and equipment per year. Medical logistics activities acquire and administer $1 billion in contracts; manage an in-use inventory valued at $2 billion; and manage war reserve, prepositioned and contingency assets of over $2 billion.

The scope of this analysis include both wholesale (Defense Logistics Agency national inventory control point and depot level functions) and retail (hospital level) medical logistics. The initial effort was to benchmark these functions against best business practices in the private sector.

Several key concepts were identified in the private sector which could be applied in the DoD. These included: the use of electronic data interchange (EDI) to facilitate communications between customers and vendors, direct delivery of supplies from between customers and vendors, direct delivery of supplies from the vendor to the medical treatment facility, and use of prime vendor contracts to take advantage of large quantity buys.

A preliminary Functional Economic Analysis was performed to assess the value of implementing these concepts in the DoD. Expected benefits of $3.2 billion over a 12 year period were identified.

Theses savings result from an expected reduction in wholesale inventory by 60%, a reduction in retail inventory by 65%, corollary savings in inventory handling costs, and savings in contract personnel for local purchase activities, etc.

Based on this analysis, Health Affairs is currently pursuing an evolutionary implementation of these business process improvements: implementing short term business process changes with high payoff potential requiring minor system changes, following a migration strategy to reduce the number of existing medical logistics systems, developing detailed process and data models, culminating in the consolidation of these business process changes in a new DoD standard medical logistics system.

POC: Robert Cooper, OASD(C3I)IM, 703-746-7906

TITLE: Multi-Application Automated Reader Card (MARC)

FUNCTIONAL AREA: Health

FUNCTIONAL PROPONENT: ASD(HA)

PROJECT PERFORMANCE: July 92 - Ongoing

DESCRIPTION: The Department of Defense has initiated a proof of principle test of the use of Integrated Circuit (IC) cards for multiple applications such as medical, mobilization, casualty tracking, dining facilities. The purpose of the test is to determine the feasibility of integrating multiple applications on a single DoD MARC card. There are several potential medical applications.

The card will be used to identify patients to the computerized hospital information system when then come to a medical treatment facility for care. Currently, these systems contain duplicate patient records; although the number of duplicates is small and are generally only a fragment of the total patient record, there is a potential for harm if the fragment were to contain important data not found in the main record. The MARC card is expected to eliminate the potential for generation of any new duplicate records.

Second, a concept is being developed to use the MARC card in the tactical environment to record minimum information about treatment of battlefield casualties at the Battalion Air Station level. When the patient is evacuated this information would then be up-loaded to the field hospital system. Currently, this information is written on a paper tag which is often lost or becomes illegible. The MARC card is expected to provide a more reliable record of initial treatment.

Third, a concept is being developed to record minimum emergency medical information (blood type, current medications, chronic disease, medical record location, etc.) for use in an emergency situation (e.g. an unconscious patient is brought into an emergency room which is remote from his/her normal duty station and the normal location of his/her medical records).

The DoD is also participating in an interagency project with the Departments of Agriculture and Health and Human Services to incorporate food stamp and Women Infant Child (WIC) program data into the MARC for DoD personnel of family members eligible for these programs.

POC: Robert Cooper, OASD(C3I)IM, 703-746-7906

TITLE: Blood Management CIM Analysis

FUNCTIONAL AREA: Health

FUNCTIONAL PROPONENT: ASD(HA)

PROJECT PERFORMANCE: July 91 - Ongoing

DESCRIPTION: The Armed Services Blood Program (ASBP) transfuses approximately 200,000 blood products per year. Baseline costs for this program over the 12 years of the analysis is slightly greater than $1 billion. This is a tri-service program to provide blood products to military personnel, their families, and other beneficiaries in the Continental United States, overseas, and between/within theaters of military operations across the continuum of operations (peace to war).

Experience shows that the potential for patients to become infected with hepatitis or the AIDS virus is small; about 40 cases per year for hepatitis and about 6 cases per year for AIDS. Nevertheless, DoD health care policy dictate that every effort should be made to reduce these risks to a level consistent with commonly accepted United States standards of care. In addition, the cost derived from this risk associated with patient treatment and settlement costs from litigation can be estimated. The expected value of these potential costs over the 12 years of the analysis is $127.6 million. These costs may well increase as the AIDS crisis worsens and the cost of treatment increases.

The business practice improvements recommended would allow the Department to comply fully with Federal Drug Administration and American Association of Blood Banks requirements and guidelines; and provide full functional, systems support and integration. Implementation costs are estimated at approximately $33 million. Net expected benefits are approximately $52 million.

POC: Robert Cooper, OASD(C3I)IM, 703-746-7906

TITLE: DoD Acquisition Business & Information Management

FUNCTIONAL AREA: Materiel & Logistics

FUNCTIONAL PROPONENT: Office of Under Secretary of Defense for Acquisition & Technology

PROJECT PERFORMANCE PERIOD: February 1993 - Ongoing

DESCRIPTION: The DoD acquisition mission is comprised of activities to acquire weapon and non-weapon systems and their necessary supporting structure needed by the DoD to meet its assigned mission. These activities are to plan, design, develop, acquire, maintain, and dispose of equipment, facilities, services, and information to support the DoD mission in an environmentally harmonious manner. Some of these activities are being individually subjected to systematic process improvement analyses using standard DoD business reengineering tools preliminary to standardizing and modernizing supporting AIS systems. The resulting process improvements and selection of standard AIS systems is being accomplished in the absence of an overall corporate level strategy providing for a fully integrated approach.

The OUSD (A&T) has established Corporate Information Management (CIM) initiative which provides for the establishment of a CIM integration office and the development of an Acquisition Business & Information Management Plan (ABIMP). OUSD (A&T) has organized a CIM team of activity area subject matter government experts complemented with a cadre of contractor facilitators to develop the major content components for the Plan. The Plan will set out corporate level visions, goals , and objectives as well as contain the top level business activity and information models depicting the complete span of activities comprising the DoD acquisition mission. This is being complemented by an OUSD (A&T) Data Administration Strategic Plan presently under development providing a road map for standardizing data elements comprising the standard systems implemented across the activities of the DoD acquisition mission.

The ABIMP is being finalized with a working copy circulating to the A&T CIM team presently holding review sessions. The Data Administration Strategic Plan outlining the program for the remainder of the FY93 has been published and the FY94 program is in its formative stages. Preparations for the integration of the activity models for Logistics and Environmental Security have been finalized.

The OUSD (A&T) will publish the ABMIP by the end of FY 1993. Two new CIM initiatives will be initiated in the areas of Research and Engineering, and Program Management (for acquisition of major weapon systems).

POC: John J. McDevitt, OASD(C3I)IM, 703-746-7907

TITLE: Defense Logistics Agency (Consumable Item Management)

FUNCTIONAL AREA: Logistics

FUNCTIONAL PROPONENT: Assistant Secretary of Defense (Production and Logistics)

PROJECT PERFORMANCE PERIOD: September 1992 - March 1993

DESCRIPTION: The Defense Logistics Agency mission is to provide logistics support, operate the distribution centers, and provide contract administration services to the Military Services and other Department of Defense (DoD) Agencies. Included in the Logistics Support is the management, procurement, storage and distribution of the majority of the consumable items (in excess of three million) used within the DoD.

The management of the consumable items is divided among five commodity oriented inventory control points. Each inventory control point purchases, stores and issues the items as required by the using Military Service and/or Defense Agency. The procurement of the consumable items is a critical process in the support of the DLA customer. Using the Corporate Information Management (CIM) approach, the Director, DLA initiated a business process improvement study of the procurement of consumable items at the inventory control points. The Defense Industrial Supply Center in Philadelphia, served as the location for the analysis.

An "AS IS" business model of the processes involved with determination of need, procurement, contracting, and receipt of stock, was developed. Using the Activity Based Costing mythology helped to provide the data needed to determine the time and cost associated with each event within the processes. A "TO BE" model was developed with improved business processes and elimination of the "non-value added" events. The results of the process improvements indicate a significant reduction of time to process a procurement action with the associated reduction in cost of doing the processes.

The next step is to develop the plan for implementation of the changes in business processes and to schedule and implement any automated systems changes necessary to support the new process model. DLA is in the process of implementation of the revised model.

POC: F. Deane Erwin, OASD(C3I)IM, 703-746-7250

TITLE: Procurement Function Review

FUNCTIONAL AREA: Procurement

FUNCTIONAL PROPONENT: Director, Defense Procurement, OUSD (Acquisition & Technology)

PROJECT PERFORMANCE PERIOD: September 92 - Ongoing

DESCRIPTION: The Department of Defense (DoD) procurement mission is to provide support to the joint warfighting commanders through the procurement of supplies and services needed to support the national defense. The Director exercises oversight of all procurement matters. The DoD components execute the procurement mission in a decentralized manner through contracting offices and contract administration offices worldwide. In FY92, DoD procurement awarded more than 12 million in contract actions with a total value in excess of $136 billion. Small purchases accounted for 98 percent of the actions and 11 percent of the obligations. DoD procurement is conducted in over 1,400 contracting offices by approximately 41,500 persons.

The magnitude and scope of the DoD procurement activity offers an excellent opportunity to improve the quality and reliability of procurement activities. Using the Corporate Information Management (CIM) approach, The Director has initiated a business improvement program with specific goals to improve business processes, eliminate duplicative and nonessential processes, eliminate legacy information systems through the selection of migration systems, and development of a target system to meet future open systems requirements. Initial steps have included establishing a vision for the program, identifying goals and strategies, setting up the structure for accomplishing the program, and defining specific goals in a functional economic analysis (FEA).

Baseline high-level process modeling has been accomplished for DoD procurement with a number of processes proposed for elimination. In-depth modeling of base level procurement, from a joint perspective is being accomplished. Further in-depth modeling of other procurement areas to include research and development, weapons systems, reparables, etc., is planned. A comprehensive data administrative program has been established. Migration systems have been identified for both procurement and contract administration.

The follow-on work continues through FY94 and includes a revised FEA, preparation of a procurement Functional Description, continued emphasis on data administration, improving and upgrading selected migration systems, and similar efforts.

POC: William S. Boone, OASD(C3I)IM,703-746-7931

TITLE: Command and Control Functional Process Improvement Activities

FUNCTIONAL AREA: Command and Control (C2)

FUNCTIONAL PROPONENT: Deputy Assistant Secretary of Defense for Strategic and Tactical Command, Control, and Communications

PROJECT PERFORMANCE PERIOD: October 1992 - Ongoing

DESCRIPTION: Under warfighting and crisis situations commanders often fail to obtain the information they need. The problem is not unavailability of information; but one of getting the right information in the right form to the right place at the right time. The changing world environment and threat have increased the Department's reliance on the use of integrated, joint or combined forces. The downsizing of our military forces and the shrinking of the defense budget means we must find ways to do things smarter and eliminate those things which not only don't add value to the accomplishment of the mission, but may negatively impact that ability.

Our objective is to provide a common picture of the battlefield and allow the Joint Task Force Commander greater control and flexibility of the fighting force.

Working with teams from the Joint Staff, Unified and Specified Commands, and military services, we are looking at the processes of command and control, from the National Command Authority to the Joint Task Force Commander. Functional process improvement efforts for deliberate and crisis planning for both Joint Staff and CINCs, execution at the CINC level, the information requirements of the Joint Task Force Commander, including a detailed examination of weather support, readiness assessment and monitoring for special operations forces, and air operations reviews have begun. We have active programs in C2 data administration to insure consistency of data across the Department.

Our goals is to increase commander's performance capabilities by building integrated mission processes that allow for data sharing and open systems. The most critical need for further action is in the integration of these efforts to support the theater operations. Not only C2, but execution such as, air operations and support functions such as, logistics and theater medical.

POC: CDR Charlotte R. Gross, USN, OASD(C3I)IM,703-746-7939

TITLE: Counterintelligence Functional Analysis

FUNCTIONAL AREA: Intelligence

FUNCTIONAL PROPONENT: DASD(Counterintelligence, Security Countermeasures and Electromagnetic Spectrum Management)

PROJECT PERFORMANCE PERIOD: February, 1993 - Ongoing

DESCRIPTION: Counterintelligence and security countermeasures (CI&SCM) protect national security by safeguarding people, facilities and technology against terrorism, espionage, or sabotage conducted for, or on behalf of, foreign powers, organizations or persons. Effective CI&SCM can counter, deter and exploit efforts that would otherwise diminish our Nation's defense capabilities. For that reason, the CI&SCM community has sought a flexible structure (functionally integrated architecture) within which it can create and provide critical support for both the policymaker and the warfighter, in the most timely and efficient manner possible. To date, no such architecture exists.

The objective of the CI&SCM functional process improvement (FPI) initiative is to develop a fully integrated (joint), functional architecture via an in-depth process analysis of current CI&SCM activities. Such an analysis would serve to eradicate duplication and inefficiencies while ensuring functional interoperability between (and within) DoD CI elements at the national, theater and local levels.

Through a series of FPI workshops, high level activities (such as data collection, information analysis and dissemination) were identified as being common to a several CI functional areas, such as investigations, operations and collections. The focus of the workshops was then narrowed to analyze the threat pertaining to Foreign Intelligence and Security Services (FISS) Human Intelligence (HUMINT). The FISS HUMINT threat process models could then provide the basis for expansion to other functions common to the DoD CI community.

An activity-based analysis of the FISS HUMINT threat revealed that much of the information collected today is not commonly available (i.e., shared) throughout the CI community, necessitating data being redundantly captured and maintained (particularly at field elements). A subsequent Functional Economic Analysis (FEA) addressed issues of interoperability, interconnectivity and source data entry. Two alternatives (both classified) were presented via the FEA. When compared to the current baseline, each alternative showed significant improvement with regard to performance metrics such as dissemination time and product preparation/coordination. Additional (classified) performance metrics were improved upon, as well.

Implementation of one of the selected alternative (classified) will start in FY94. In the interim, CI&SCM will continue its FPI initiative, developing Joint Service process models pertaining to investigations, operations and collections.

POC: Tom Lopez, OASD(C3I)IM, 703-746-7395

TITLE: Processing of Personnel Security Actions

FUNCTIONAL AREA: Intelligence

FUNCTIONAL PROPONENT: DASD(Counterintelligence, Security Countermeasures and Electromagnetic Spectrum Management)

PROJECT PERFORMANCE PERIOD: March, 1992 - Ongoing

DESCRIPTION: Each year, approximately one million Americans complete a DoD personnel security questionnaire (PSQ) of some type. For those awaiting security clearances, cycle-time (i.e., the time required to process a PSQ) can be of great importance. Military personnel, for example, can be assigned additional duties while awaiting a security clearance, whereas, lack of cleared personnel may result in lost productivity and overruns for a DoD contractor. Many in DoD have long considered cycle-times, particularly those involving Special Background Investigations, to be too long. To address that concern, the Defense Investigative Service (DIS) embarked upon a functional process improvement (FPI) initiative to evaluate the activities associated with processing personnel security actions (PSAs).

The objectives of the DIS FPI initiative were to reduce the internal costs and cycle-times associated with PSAs. By meeting these objectives, DIS could also significantly reduce external costs, through cost-avoidance.

FPI workshops enabled DIS to cost out the activities associated with processing PSAs. DIS not only eliminated all non-value added activities, but discovered a course of action which would reduce both costs (internal and external) and cycle-time. A functional economic analysis (FEA) determined the best alternative for processing PSAs. The FEA enabled DIS to "benchmark" against the current practices of other organizations i.e.,Blue Cross/Blue Shield, Nationwide Insurance, amd other investigative agencies, all of which process large volumes of information related to individuals. As a result, the development of the Electronic Personnel Security Questionnaire (EPSQ) was cited as the best alternative. The EPSQ provides for the electronic capture, transmission and use of personnel security history data within DIS and throughout all of DoD. The EPSQ will reduce cycle-times by 8 days for DoD/Military PSAs and by 12 days for Industry PSAs. PSQ rejection rates (those PSQs which cannot be processed due to illegibility, incompleteness, or lack of required subject information) will be reduced from 9.9% to 2.8% for DoD/Military PSAs and from 25.5% to 2.0% for Industry PSAs, by eliminating common errors occurring at the data-entry source (through the use of data edits). Based on caseload projections, it is anticipated the EPSQ will save DoD between $900 million and $1 billion over the next six years (through cost avoidance).

Implementation of the EPSQ in now underway. Alpha (controlled data) and Beta (live data) testing of EPSQ software applications is scheduled for 1st Quarter, FY94. Phased distribution is scheduled to begin 2nd Quarter, FY94. DIS is continuing its FPI initiative through the development of a corporate strategic plan.

POC: Tom Lopez, OASD(C3I)IM,703-746-7395

TITLE: Management and Use of the Electromagnetic Spectrum

FUNCTIONAL AREA: Command and Control

FUNCTIONAL PROPONENT: DASD(Counterintelligence, Security Countermeasures and Electromagnetic Spectrum Management)

PROJECT PERFORMANCE PERIOD: June 1992 - Ongoing

DESCRIPTION: The electromagnetic spectrum is a finite asset that is shared by all government and non-government users. The spectrum is also a critical resource that DoD is completely dependent upon to accomplish its mission. As competition for spectrum use continues to increase, government resources (including those allocated to DoD) are under review by Congress for possible reallocation to the civil use.

The focus of this effort pertains to the management and use of the electromagnetic spectrum (MUES) within DoD. Many of today's spectrum management functions are Service or CINC (Commanders-in-Chief of the Unified and Specified Commands) unique, remain disconnected from other Command and Control (C2) functions and, for the most part, lack basic automation. Given the criticality of the spectrum to military operations, the nature of current practices, an impending loss of spectrum access, and the shortage of qualified spectrum management personnel, the MUES effort quickly became an ideal candidate regarding functional process improvement (FPI).

FPI workshops documented a number of MUES functions (such as spectrum certification, frequency assignment and assignment engineering analysis). The process models, coupled with a fully attributed data model, have provided a basis from which a MUES functional architecture can be developed. This requirements-driven architecture, in turn, will ensure interoperability between Service and CINC spectrum management efforts, as well as other C2 functions (to include any associated automated systems). This will enable DoD to execute its missions despite loss of access to a portion of the electromagnetic spectrum (HR707 and S335 are two bills before Congress that will take 200 MHz of spectrum access away from DoD). DoD spectrum managers anticipate that the functional architecture (or strategic plan) could be adapted for use throughout the U.S. Federal Government and would have a significant impact on spectrum management practices worldwide.

The FPI workshops have yielded more than 150 functional improvement opportunities pertaining to MUES. One such opportunity will be the development of a spectrum certification data base (FY94), which, in turn, will enhance both peacetime and warfighting capabilities, reduce costs, and eliminate a number of redundant activities. Future FPI initiatives will include a process analysis of the policies and procedures that govern spectrum use and tactical spectrum management.

POC: Tom Lopez, OASD(C3I)IM, 703-746-7395

TITLE: Reserve Retirement Data Management

FUNCTIONAL AREA: Reserve Affairs

FUNCTIONAL PROPONENT: Office of the Assistant Secretary of Defense for Reserve Affairs (OASD(RA))

PROJECT PERFORMANCE PERIOD: September 92 - Ongoing

DESCRIPTION: The management of retirement data for members of the Reserves is handled differently by each Reserve component. The determination of active and Reserve service creditable towards a Reserve retirement and of creditable retirement points is directed by Title 10 United States Code, but actual calculation of creditable service is determined by individual Reserve component directives. Over the years these directives have evolved to the point that significant inconsistencies exist between Reserve components.

Using the Corporate Information Management (CIM) approach in DoD, a series of business process improvement workshops were held with subject matter experts from the Office of the Assistant Secretary of Defense for Reserve Affairs (OASD(RA)), Army Reserve and National Guard, Air Force Reserve and National Guard, Marine Corps Reserve, Naval Reserve, and the Coast Guard Reserve. Each Reserve component described its individual processes for managing retirement data, its position regarding a common Department of Defense (DoD) policy to manage retirement data, and preferred solutions for improving the sharing and archiving of retirement data. As a result of these component descriptions, a consolidated model representing the generic "AS-IS" process was formulated and agreement was reached regarding a standard policy for managing retirement data.

Upon implementation of the recommended changes to policy, the services expect to experience a significant reduction in the time necessary to receive and verify participation histories of transferred service members. The accuracy of the participation histories will be improved, eliminating the need for members to report discrepancies between actual participation and reported participation.

The follow-on work continues through the first quarter of FY94 and includes an abbreviated functional economic analysis and potential alternative solutions for storing and accessing the historical data.

POC: Lynne M. Sullivan, OASD(C3I)FP&H, 703-746-7905

TITLE: Military Mobilization/Reconstitution

FUNCTIONAL AREA: Reserve Affairs

FUNCTIONAL PROPONENT: Office of the Assistant Secretary of Defense for Reserve Affairs

PROJECT PERFORMANCE PERIOD: January 93 - Ongoing

DESCRIPTION: The national mobilization enterprise is more than bringing military Reserve components to active duty to expand the peacetime active military force structure; rather it involves activities in twelve resource areas:

manpower	transportation	equipment/material
medical	communications	training base
facilities	environment	host nation support agreement
training base	industrial base	legal authorities funding

These areas are interactive and interdependent; that is activities occurring in any one area may impact in varying degrees on one or many of the others. The approach is to focus on decisions and activities that interrelate in terms of manpower and other resources and determine the effect of interrelated variables on one another to provide an overarching perspective of cause and effect relationships. Then through a series of workshops utilizing subject matter experts and employing the business process improvement methodology, the Joint Staff (J-4) began building the "AS-IS" mobilization environment. A few of the opportunities were standard mobilization process regardless of scenario, add non-deployable asset requirements to planning documents, develop a standard "weighting" process for mobilization decision makers, eliminate duplication of effort and processes that do not add value to managing mobilization, etc.

Benefits derived from implementing some of these potential business process improvements include: reduce confusion and develop a common understanding of the mobilization process, improved alternative solutions, introduce realism into the mobilization planning process, reduce risk of surprise at execution, reduce costs, simplify mobilization process, etc. Joint Pub 4-05, Military Mobilization Planning Doctrine, has been released as a result of this effort. The joint mobilization planning group met June 93 and approved Joint Pub 4-05 agreeing to continue providing subject matter expert support to this effort.

Further analysis is required in working with the services and CINC's to implement the mobilization planning and execution process to include working with the CINC's and the services to continue BPI efforts across the twelve resource areas as well as standardize mobilization data and perform the cost analysis.

POC: Lynne M. Sullivan, OASD(C3I)IM, 703-746-7905

TITLE: Software Reuse

FUNCTIONAL AREA: Information Management

FUNCTIONAL PROPONENT: OASD(C3I), Director, Information Technology

PROJECT PERFORMANCE PERIOD: September 1991 - Ongoing

DESCRIPTION: The Department of Defense (DoD) has evidence that software reuse principles, when integrated into acquisition practices and software engineering processes, provide a basis for dramatic improvement in the way software-intensive systems are developed and supported over their life cycle. To achieve these improvements the DoD has established a Software Reuse Initiative with the objective of making a software reuse-based paradigm the preferred alternative for developing and supporting software. This Initiative is a cooperative federation of independent software reuse programs which address all types of software-intensive systems managed by the DoD: information systems, command and control systems, and weapon systems.

Specific goals of the initiative are to: improve the quality and reliability of software-intensive systems, provide earlier identification and improved management of software technical risk, shorten system development and maintenance time, and increase effective productivity through better utilization and leverage of the software industry.

Initial steps have included establishing a vision for the program, identifying goals and strategies, setting up the management structure, and developing a program management plan. Significant accomplishments to date include publication of the DoD Software Reuse Initiative Vision and Strategy (July 15, 1992), prototype interconnection of the three major DoD reuse library systems, and establishment of a formal relationship with industry to ensure their concerns are addressed. Although not yet fully institutionalised within the DoD, software reuse has already achieved over $400M in cost avoidances on software development projects.

Subsequent steps to achieve systematic reuse are being taken based on the vision of software reuse enabled and facilitated by (1) the existence and use of domain (or mission area) specific software architectures, (2) processes which treat software reuse as an inseparable part of software engineering and acquisition, and (3) interconnected reuse libraries which provide the ability to locate and share reusable assets. To achieve this, efforts are underway in the areas of legal and acquisition guidance, formulation of a technology roadmap to guide the technology base investments, metrics, education and training, defining and establishing domains/domain boundaries, asset management, and operational implementation of library connectivity.

POC: Linda Brown, OASD(C3I)IM, 703-746-7928

TITLE: Data Administration

FUNCTIONAL AREA: Information Management

FUNCTIONAL PROPONENT: ASD(C3I)

PROJECT PERFORMANCE PERIOD: September 1991 - Ongoing

DESCRIPTION: The use of standard descriptions and representations of the Department's data requirements is essential for interoperability and for ensuring that consistent, timely, and complete information is available for decision-making.

DoD Directive 8320.1, "DoD Data Administration," was published September 26, 1991 and provides the policy and responsibilities for the development of DoD standard data and their handling throughout their life cycle. This represents a dramatic change in approach to the standardization of data and its maintenance in databases within the Department.

A Defense Data Repository System (DDRS) has been established to use for approving and storing standard data. Procedures for data element standardization has been published, and procedures for data administration and data modeling are being coordinated. Several other procedures documents are being drafted. Training classes in data administration have been prepared and presented over the last year. Data administration strategic plans have been developed by the OSD functional staff and by the DoD components which support the overall DoD data administration guidance and direction. A strategic level Data Model has been drafted which will be extended by data modeling efforts within the Components and the OSD functional staff. Additionally, some data reverse engineering efforts have been done to generate standard data elements.

With the "basic building blocks" in place, it is anticipated that we will be able to rapidly generate standard data and begin to migrate our systems to use it , and to populate our databases with it. Industry experience has been a 10:1 reduction in data elements, 33% reduction in database administration costs, 33% reduction in data storage device requirements, and 20% reduction in system maintenance costs. We look forward to equivalent savings over time.

POC: Robert W. Molter, OASD(C3I)IM,703-746-7926

TITLE: Integrated Computer-Aided Software Engineering (I-CASE)

FUNCTIONAL AREA: Information Management

FUNCTIONAL PROPONENT: Deputy Assistant Secretary of Defense (Information Management)

PROJECT PERFORMANCE PERIOD: May, 1991 - March, 1995

DESCRIPTION: The Department of Defense is the largest software development organization in the world. The budget for information management systems alone exceeds $9.5B per year, and when embedded weapons systems software is included, exceeds $24B per year. Improving the productivity and quality of the DoD software process is critical; even small changes in productivity can lead to large dollar savings.

The Integrated Computer-Aided Software Engineering program will provide a standard Software Engineering Environment (SEE) with associated training and technical services for developing and maintaining DoD automated information systems. The I-CASE acquisition will include process and data modeling tools for business reengineering, a full range of software life-cycle development tools, and an information repository for integrating data used among the tools. The integration of the data among the development tools is the key to productivity increases.

In 1991, the DoD Software Technology Strategy estimated that the use of a fully integrated software development environment would increase development productivity by 23%. Other industry sources report productivity gains in the 10%-25% range. Increased productivity will allow existing software systems to be developed and maintained with fewer resources as the DoD budget declines. Additional cost savings, estimated to be $60M per year, will be achieved by I-CASE being a DoD-wide contract.

I-CASE is currently an on-going acquisition. The I-CASE Request for Proposal was released in August, 1992, with bids received in November, 1992. The contract is expected to be awarded in November, 1993. After awarding the I-CASE contract, DoD will initiate a 15 month test period to validate the I-CASE SEE. An initial three month acceptance test period will be followed by one year of pilot project evaluations at 19 DoD sites across the United States.

POC: Dr. Frederick C. Hathorn, OASD(C3I)IM, 703-746-7924

DISTRIBUTION

- Assigned to DEFENSE LOGISTICS AGENCY
- All Distribution Depots "belong" to DLA
- Selected Migration System
- IMPLEMENTING AT TWO REGIONS
  - NEW CUMBERLAND/MECHANICSBURG, PA
  - SHARP/TRACY, CA
- TWO LEVELS
  - UPPER LEVEL MANAGES RECEIPTS/ISSUES
  - LOWER LEVEL DRIVES AUTOMATED WAREHOUSE EQUIPMENT

DEPOT MAINTENANCE

- Joint Logistics Information Systems has selected Air Force Depot Maintenance Management Information System (DMMIS)
- In process of implementing of portions in Army, Air Force, and Navy repair depots.

PROCUREMENT

- Have selected migration systems for:
  - Contract Administration
  - Support to Inventory Control Points (ICP)
- Will implement ICPsystem with Materiel Management system in Jan 1995 at Albany, GA.
- Evaluating Base Level systems in order to select migration system.

ENVIRONMENTAL

- Joint Service/Agency committee with Army serving as Executive Agent
- Have selected migration system to support three functions.
  - Considerable number of environmental systems within the services to be evaluated.

GAO - Do logistics which is the furthest along in migration systems?
Wholesale system -
That's the one in ICSC, showing
conveying

INSTALLATIONS

Installations is defined as the Real Property functions (e.g., Buildings, roads, facilities, utilities) that are constructed, maintained and operated by the DoD

- Just starting to identify the areas to be covered
- Recently placed under the DUSD (Environmental Security)

"LOGISTICS" TRANSPORTATION

- Transportation Systems Command (Scott AFB) is in the process of setting up a Transportation CIM organization.
- They have already begun the process of selecting systems to support joint transportation requirements.

CALS & EC/EDI

Computer -aided Acquisition and Logistics Support
Electronic Commerce/Electronic Data Interchange

- For CALS have identified a standard system to support two of the functions (Technical Data and Maintenance Manuals)
- For EC/EDI:
  - Established DoD architecture for EC/EDI which will provide one DoD "face" to industry for EC/EDI.
  - New effort by the DUSD(Acquisition Reform) to implement EC/EDI across the DoD for all purchases under $25,000. This will cover over 90% of procurements. To be implemented within 24 months.

HUMANITARIAN ASSISTANCE

Humanitarian Assistance provides excess personnel property to foreign countries through the State Department.

We completed a model to identify requirements and developed a PC Based system. The "as is" was manual system.

- System provides for visibility of inventory in their warehouses in CONUS and at European and Pacific locations.
- Provides e-mail capability
- Provides access to DoD Excess Personal Property system.

Deployment Readiness Information System

Provides Commanders with up-to-date status on their soldiers readiness to deploy.

Existing systems are manual and requires soldiers to assemble in one location to check status.

After completing the CIM evaluation of process, developed system using "smart card".

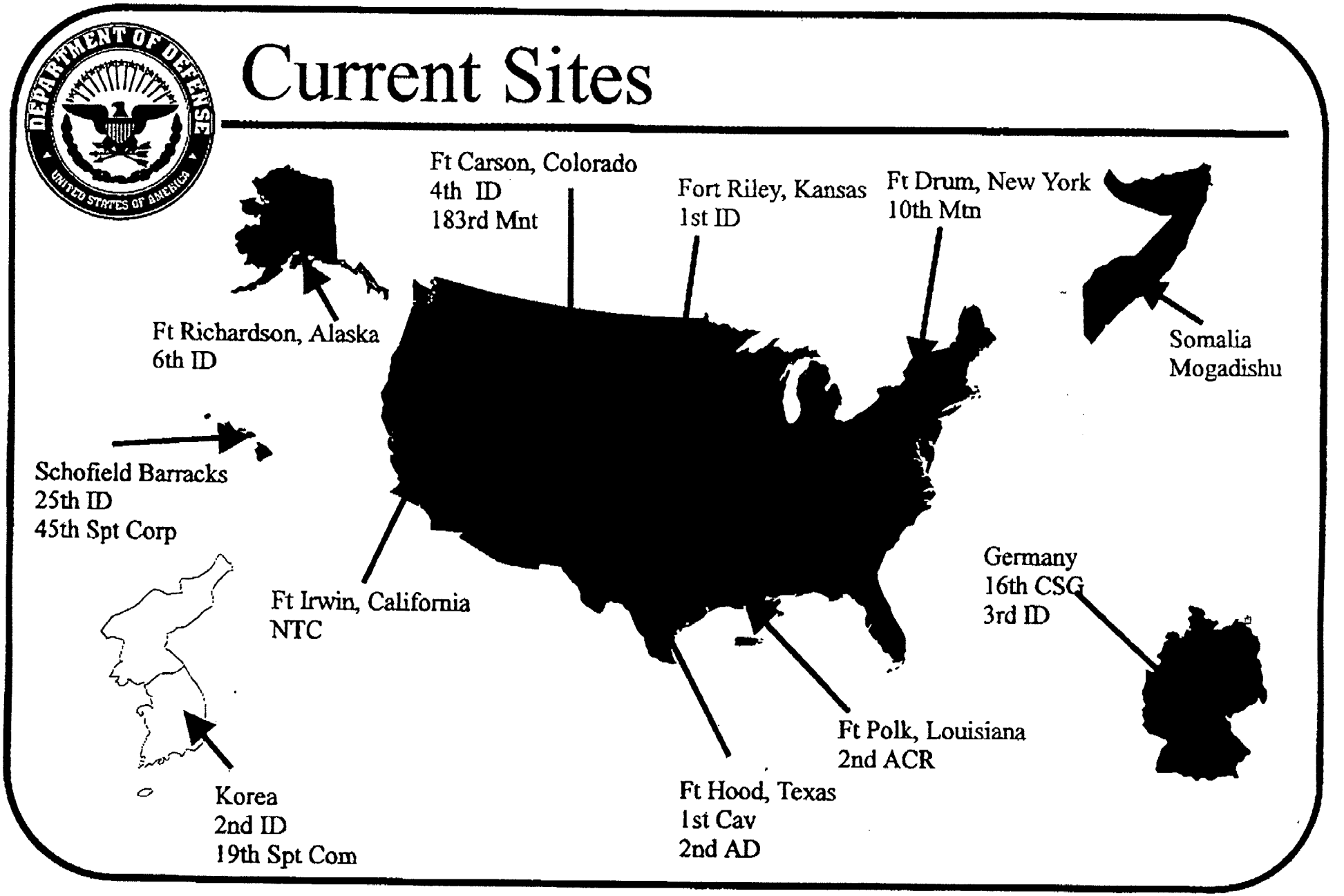
Connects commanders to appropriate data bases to determine readiness status of soldiers. Done from Commander's office and necessary updates done by individual soldiers.

Installed at Fort Bragg - Implementing at 1st Armor in Germany.

Integrated Logistics Analysis Program (ILAP)

- Extracts data from several existing supply, transportation, maintenance, and financial systems into a consolidated user-defined system.
- Combines and compares the data from the various systems to provide the commanders a total view of status of functional areas. i.e., status of back orders, status of equipment in repair awaiting parts and if so are parts on order.
- To date the system is install at several locations around the world. (Map of locations attached)

Current Sites



FUNCTIONAL PROCESS IMPROVEMENT

APPLICATIONS IN FINANCIAL MANAGEMENT

PRESENTED BY: SANDY ROGERS
FUNCTIONAL INFORMATION MANAGER - FINANCE & ACCOUNTING
ODASD(IM)

OCT 6, 1993

- DFAS Strat Plan -
- Who makes decisions on these systems -
  Every single one of these systems went thru the FM-FSC;
  - DFAS staffs the systems

GAO — How long was process for identifying -rs
7/1992 identified all legacy systems
large # of legacy systems

FUNCTIONAL PROCESS IMPROVEMENT
APPLICATIONS IN FINANCIAL MANAGEMENT

STRATEGIC PLAN (20 SEP 1993)

- MISSION
- VALUES
- TARGET FINANCIAL ARCHITECTURE

MIGRATION SYSTEMS

- LEGACY APPLICATIONS IDENTIFIED 270
- MIGRATION APPLICATIONS SELECTED 9
- APPLICATIONS UNDER STUDY 206

KEY FUNCTIONAL PROCESS IMPROVEMENT DATA STANDARDIZATION PROJECTS

- COMPLETED

  Defense Finance and Accounting Strategic Data Model
  DoD Pay Strategic Data Model
  Military Pay Tactical Data Model
  Allotment Management Operational Data and Process Model
  Defense Civilian Payroll (DCPS) Reverse Engineering Data Model

- IN-PROCESS

  * Defense Finance and Accounting CIM Data Model
  DoD Universities Financial Management Process and Data Model

FUNCTIONAL PROCESS IMPROVEMENT
APPLICATIONS IN FINANCIAL MANAGEMENT

TECHNICAL INTEGRATION STRATEGY

- COMPLETED

  Developed Defense Integration Support Tools (DIST) for Detail Finance & Accounting information systems
  Developed Draft initial "Finance Near-Term Technical Architecture"
  Developed Draft Technical Integration Action Plans (Workstations, Data Bases, User Interface & Communicatio

- IN-PROCESS

  Continued update of above identified products
  Technical Support for Migration System Selection

SPECIAL INTEREST

- DEFENSE BUSINESS OPERATIONS (DBOF) IMPLEMENTATION REVIEW

  Defense Business Operations Fund Improvement Plan Published
  OASD(C3I) Participated in the Review and Supports Outcomes

  Improving Accountability and Control
  Improving Structure
  Improving Policies & Procedures
  Improving Financial Systems (Revisit DBMS & Selection of a Suite of Migratory Systems)

  OASD(C3I) will continue participation in Financial Management Steering Group, and will approve the technical requirements document for Finance & Accounting
  DBOF Implementation Plan Supports CIM Procedures

DoD DATA ADMINISTRATION PROGRAM

Ms. Belkis Leong-Hong
Acting Director, The Center for Information Management
Defense Information Systems Agency
October 1993

DoD DATA ADMINISTRATION PROGRAM

What . . .

"The responsibility for definition, organization, supervision, and protection of data within an enterprise or organization."

- DoDD 8320.1, DoD Data Administration
September 26, 1991

PITFALLS OF POOR DATA

CAN'T MAKE GOOD DECISIONS BECAUSE OF:

- Bad Data
  - Conflicting Data
    - Obsolete Data
      - Missing Data
        - Inability To Aggregate /Integrate Data

MAKE BAD DECISIONS BECAUSE YOU:

- √ Don't know when or if you have a data problem
- √ Don't know how bad the problem is
- √ Can't get the info needed to solve the problem
- √ Information is incomplete or incorrect

DoD DATA ADMINISTRATION PROGRAM

BENEFICIARIES OF DATA ADMINISTRATION

Two classes of beneficiaries:

- **DECISION MAKERS**

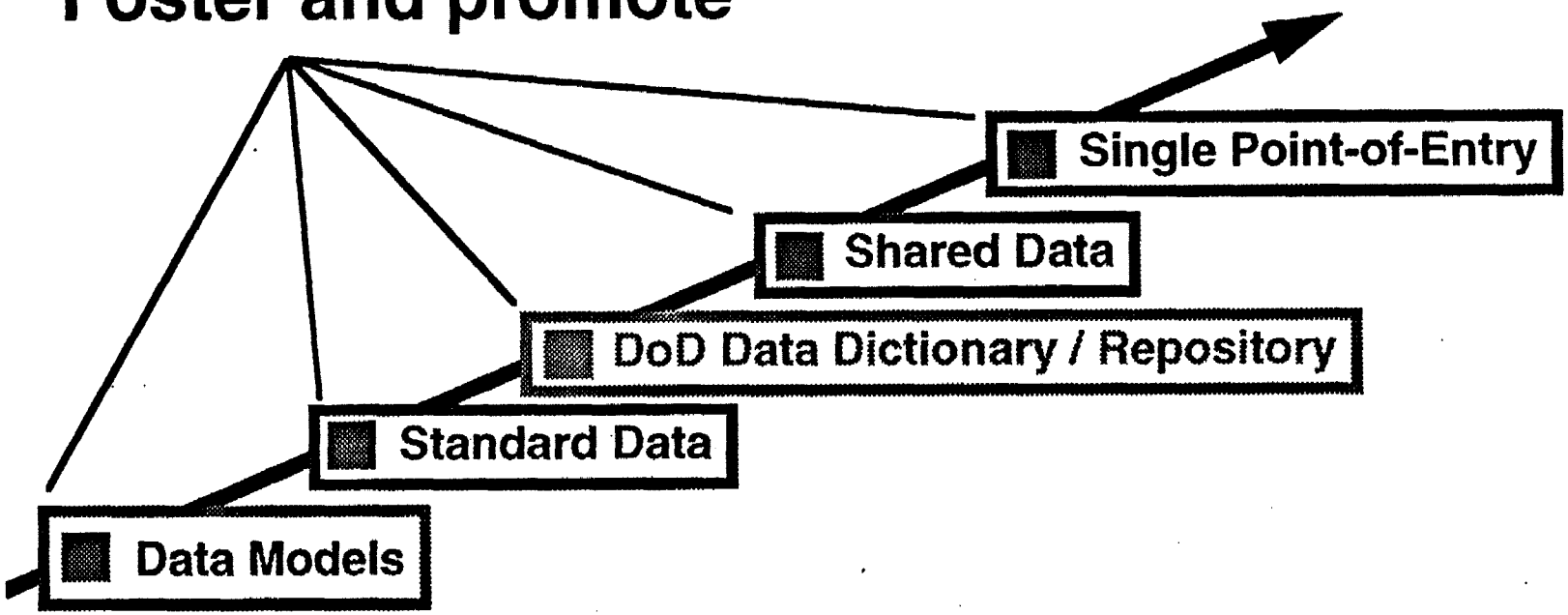
  (end users: e.g., warfighter, CINCs, SecDef)

- **SYSTEMS BUILDERS**

Center for Information Management

DATA ADMINISTRATION

Foster and promote

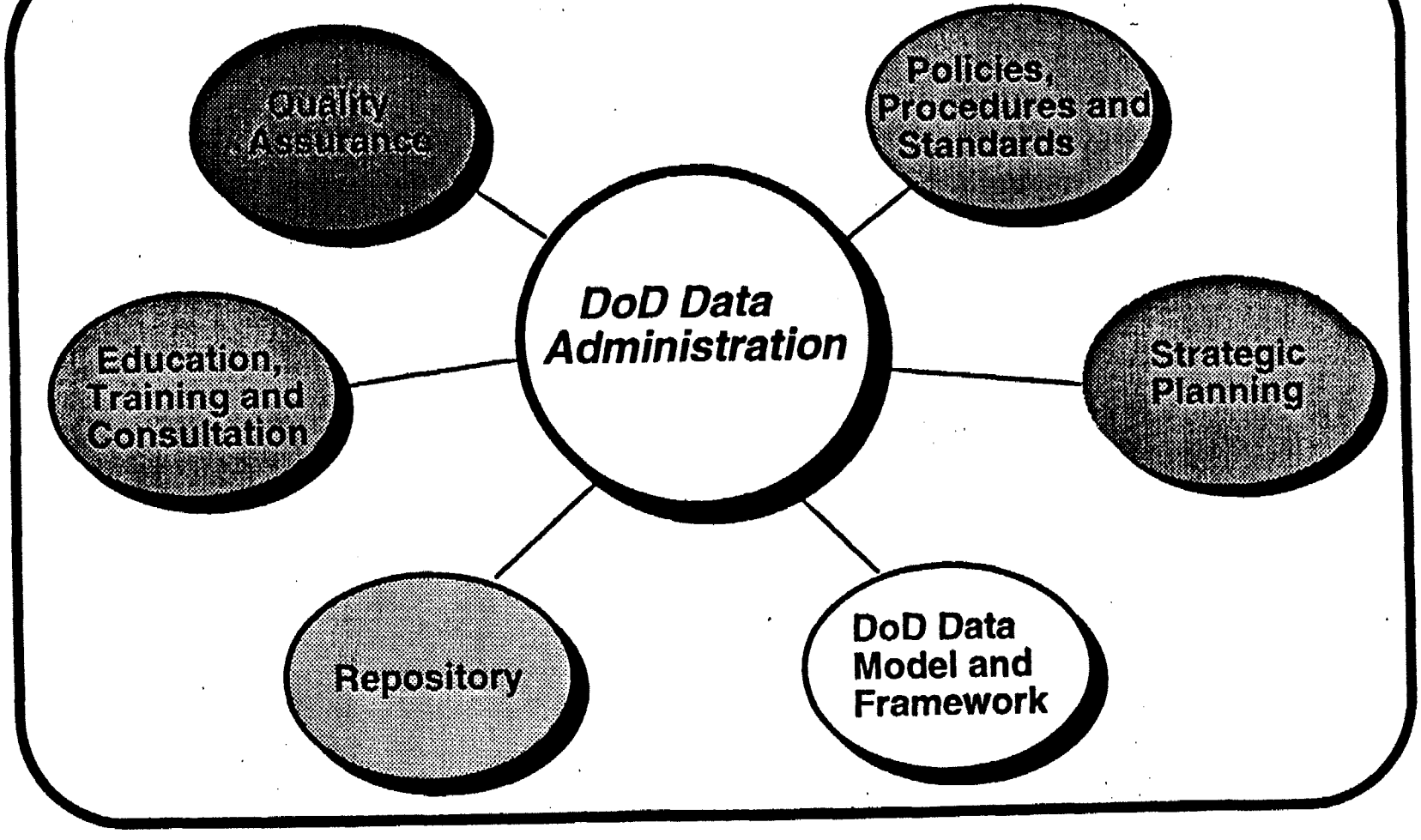


Legacy Information Systems Environment

Integrated Information Systems Environment

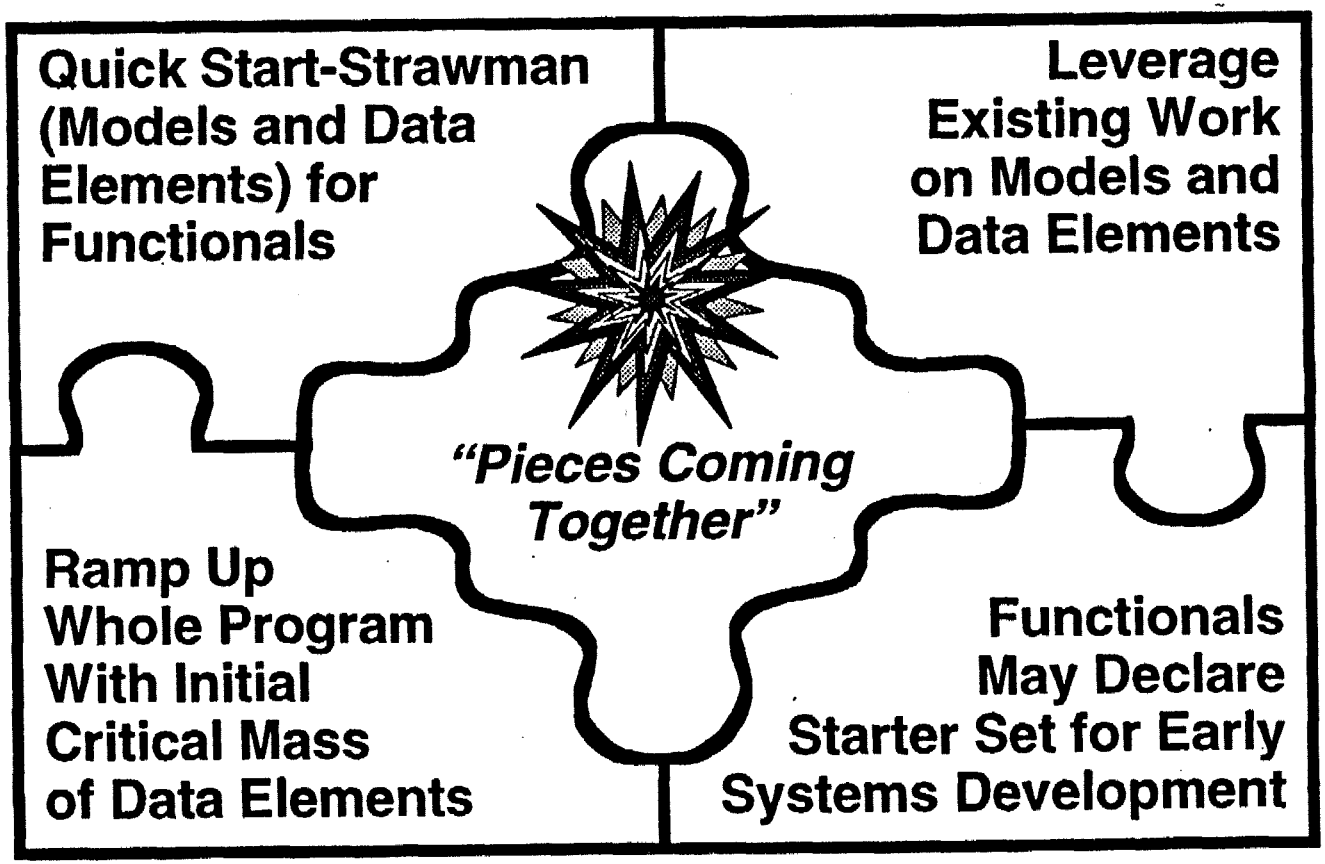
DoD DATA ADMINISTRATION PROGRAM

Elements of the DoD Data Administration Program



Center for Information Management

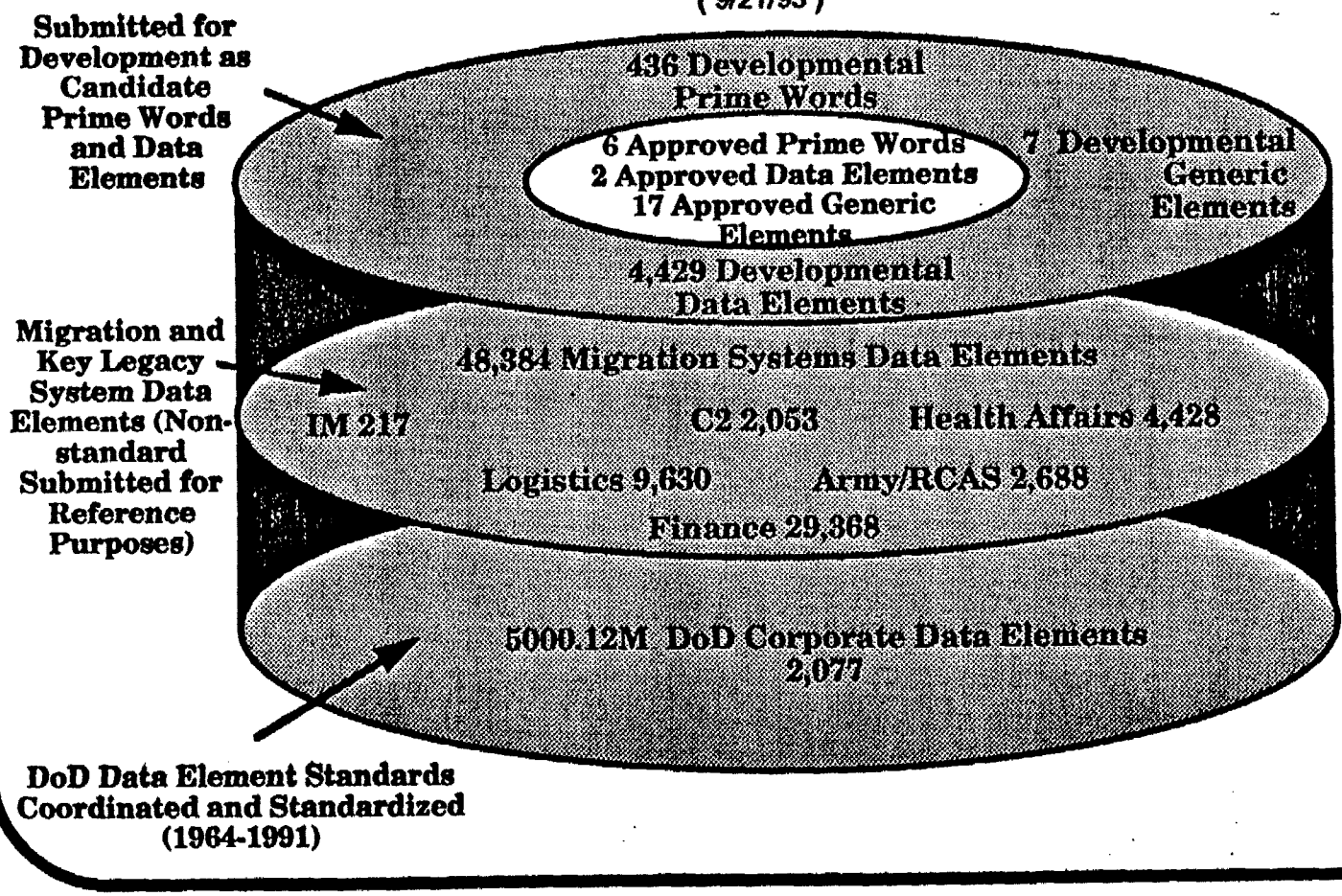
"Pieces Coming Together"



DoD DATA ADMINISTRATION PROGRAM

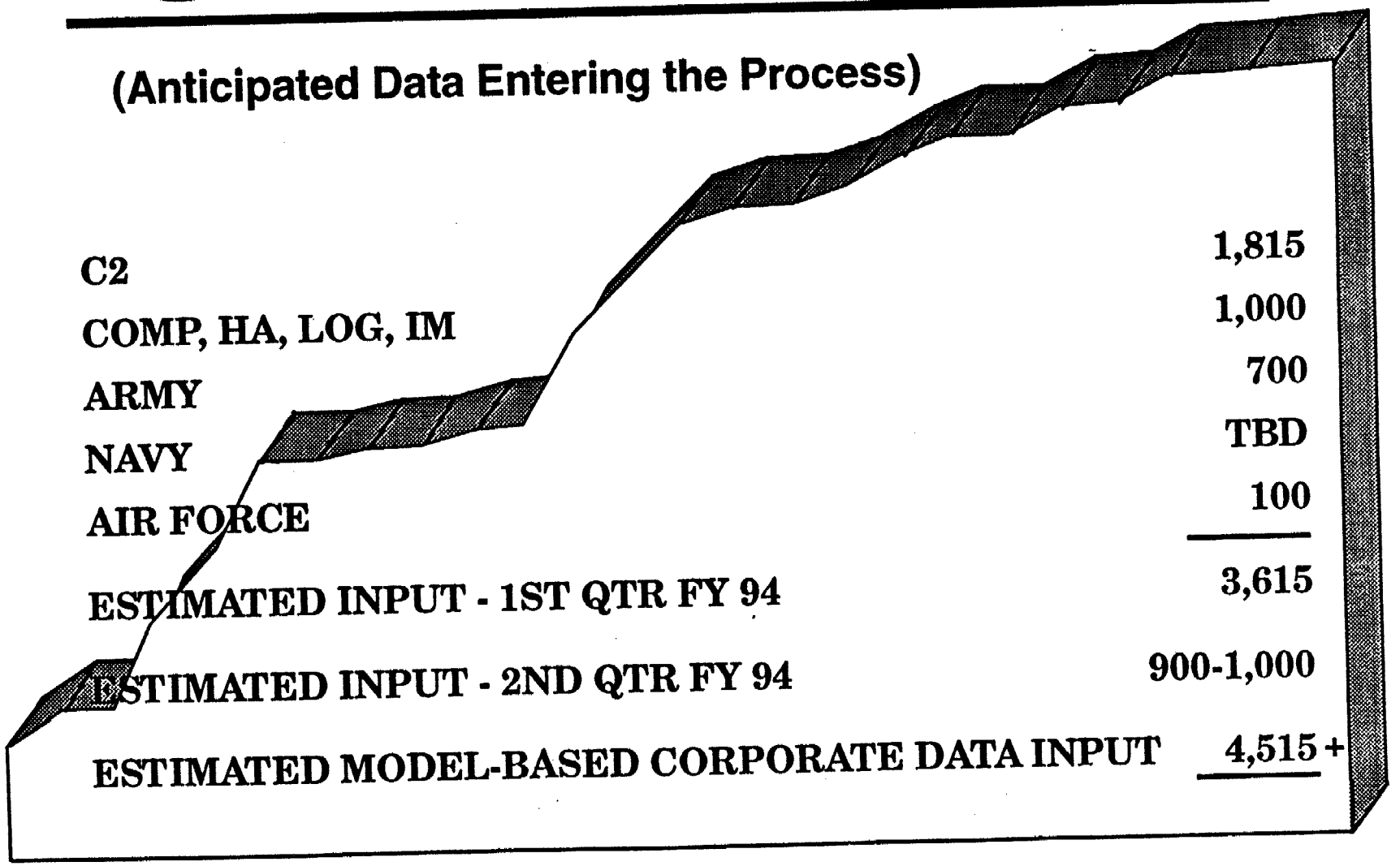
Contents of the Defense Data Repository System

(9/21/93)



Center for Information Management

Model-based Enterprise Data in the Pipeline for 1st Half FY94



(Anticipated Data Entering the Process)

C2	1,815
COMP, HA, LOG, IM	1,000
ARMY	700
NAVY	TBD
AIR FORCE	100
ESTIMATED INPUT - 1ST QTR FY 94	3,615
ESTIMATED INPUT - 2ND QTR FY 94	900-1,000
ESTIMATED MODEL-BASED CORPORATE DATA INPUT	4,515+

DoD DATA ADMINISTRATION PROGRAM

NEAR TERM CHALLENGES:

- Paradigm Shift In DoD IM Business
  - Data Administration Is Only One Component Of Change
- All Elements Of The DA Program Needed At Once
  - Intensive Ramp Up Required
- Data Administration Is A "Hard Sell"
  - DA Concept Is Not Intuitive
  - Payback Is Not Immediate
  - Significant Initial Investment Is Required

CIM: Data Administration Issues - GAO

- A central goal of Corporate Information Management is to improve Defense operations and reduce costs through improved management of information.
  - DoD concurs with observation but does not concur that the CIM "Process" Model needs to be applied in a strictly top-down fashion.

- Defense has not determined its corporate data requirements.
  - DoD has not fully determined all of its data requirements. Functional managers are in the process of determining their data needs. Data standardization is not something that happens all at once, and it does not happen quickly when it is done correctly.

- Data element standardization procedures are premature and ineffective.
  - DoD does not concur that these procedures are either premature or ineffective. We needed procedures to do it right and data modeling procedures are being circulated now. Regardless of how they were built, data models can be used to develop well-formed, single concept corporate data elements. We have funded and backed the IDEF Federal standard development.

- Defense Data Repository System does not support Data Administration goals.
  - DoD concurs that functional process improvement is needed for data administration now that we have it going. We are doing a functional process improvement study. We have done a requirements analysis for the DDRS and are proceeding with a requirements validation and acquisition planning. The DDRS is needed until it can be replaced.

C3I Functional Information Management

Established FIM in Jan 1992

C3I Functional Areas:

- Command and Control
- Telecommunications
- Intelligence
- Counterintelligence
- C3I Space Systems
- Security
- Countermeasures
- Joint Warfighting
  - Air Operations
  - Fire Support
  - etc.

Clients for C3I CIM:

- OASD(C3I)
- OJCS
- CINCS
- Services & Agencies

Weather Interoperability for the Joint Task Force Commander

The Joint Staff working group on weather support initiated a Functional Process Improvement effort to address the problems of interoperability with customer systems and to redefine procedures for weather support, specifically addressing the Navy's Fleet Meteorology and Oceanographic Center and Air Force's Global Weather Center systems. The weather community is acutely aware of the need for all-source weather support to JTF commanders under the new military strategy. They are enthusiastically addressing the needed functional process changes needed to bring together the Air Force and Navy weather support activities to better support command and control. The group has already begun to implement recommendations. They have issued a CJCS Instruction and are developing two Joint Pubs to institutionalize their work. DISA is using this work to develop an interoperable communications architecture for weather and oceanographic support in joint theater operatins.

Readiness Assessment for Special Operations Forces

Several provisions of the Goldwater/Nichols DoD Reorganization Act of 1986 were aimed at improving the DoD readiness assessment process. A 1991 DoD IG report found USSOCOM does not have an adequate mechanism to compile and collectively evaluate all key readiness indicators and then manage actions required to correct readines deficiencies. The command wanted analysis that integrates readiness reporting systems. Their Functional Process Improvement work, completed 20 Aug 1993, concentrated on the readiness monitoring process. Their final report and recommendations were distributed in September with a preliminary requirements document for an integrated readiness monitoring system and a fully attributed data model which could serve as part of a system requirements specification. Because of the budget cut, USSOCOM's ability to procure such a system has been severely impacted. These documents have, however, been provided to DISA and the Joint Staff for consideration to include these functional requirements in their development of the Global Command and Control System. We believe the implementation of the data model USSOCOM developed, in conjunction with their component commands, would provide the capability to provide an integrated assessment of military capability (readiness, modernization, force structure, and sustainability). In this new world order, with its requirements for a quick reaction force, such an information system is a must have.

DoD Spectrum Management

*** Frequency Assignment:**

Traditionally, a frequency assignment has taken at least 3 (and up to 6) months from the point of initiation to final approval. The Management and Use of the Electromagnetic Spectrum (MUES) Functional Process Improvement (FPI) initiative discovered a number of improvement opportunities (currently being implemented) whereby a frequency assignment can now be made in approximately 3 weeks. Edit checks pertaining to frequency assignments have been decentralized and are now being made at the base level. "Cross checks" against NTIA guidelines are now made at the source (i.e., the installation) rather than the destination (i.e., NTIA). These changes to the frequency assignment process have reduced the time it takes to make an assignment by 75%. With automation enhancements it is expected that a frequency assignment can be obtained in less than a week.

*** Air Land Sea Application (ALSA) Center Tactics, Techniques and Procedures (TTP):**

Until the MUES FPI initiative, no instruction or manual existed within DoD that would assist a spectrum manager operating in a joint environment. This lack of joint spectrum management procedures was a critical deficiency experienced in Operation Desert Shield/Desert Storm (as identified by the J-3 community). Cited as a fundamental improvement opportunity, the ALSA TTP describes the Joint Task Force (JTF) structure and the steps necessary to ensure that adequate spectrum resources are both available and interference-free. As the ALSA TTP undergoes its final review, a training course (using the ALSA TTP as its basic document) is concurrently being developed and is scheduled for delivery in December 1993.

Defense Investigative Service (DIS)

*** Personnel Security Actions (PSAs):**

FPI workshops have enabled DIS to cost out the activities associated with processing PSAs. DIS not only eliminated all non value-added activities, but discovered a course of action which would reduce both costs (internal and external) and cycle-time. A functional economic analysis (FEA) determined the best alternative for processing PSAs. The FEA (or business case) enabled DIS to "benchmark" against the current practices of other organizations (Blue Cross/Blue Shield, Nationwide Insurance, as well as other federal investigative agencies), all of which process large volumes of information related to individuals. As a result, the development of the Electronic Personnel Security Questionnaire (EPSQ) was cited as the best alternative. The EPSQ (currently being implemented) provides for the electronic capture, transmission and use of personnel security history data within DIS and throughout all of DoD. The EPSQ will reduce cycle-times by 8 days for DoD/Military PSAs and by 12 days for Industry PSAs. PSQ rejection rates (those PSQs which cannot be processed due to illegibility, incompleteness, or lack of required subject information) will be reduced from 9.9% to 2.8% for DoD/Military PSAs and from 25.5% to 2.0% for Industry PSAs, by eliminating common errors occurring at the data-entry source (through the use of data edits). Based on caseload projections, it is anticipated that, the EPSQ will save the DoD community between $900 million and $1 billion over the next six years (through cost avoidance).

Joint Fire Support

The purpose of this effort was to address the non-interoperability of digital entry devices (also known as message transfer devices), one of six major interoperability issues identified by the Joint Staff following Desert Storm. A a result of this project a MILSTD was developed and promulgated for a telecommunications protocol for comba net radio. The data model produced currently supports over 92 percent of all the fire support data in use today in multinational exchange and joint operations. In fact it is being looked at for adoption as the core C2 and enterprize data model. Work is continuing in the areas of close air support and surface to surface artillary. Existing standarc will be assessed against these activity and data models and changes implemented as required through the configuration control process.

Transportation management

U.S. Transportation Command developed a migration strategy to improve operational support aircarft scheduling (passenger aircraft) which will be implemented this fiscal year. In fiscal year 1994 they plan to continue (subject availability of funds) with the area of cargo aircraft and perhaps how we contract for commercial air carriers.

Top Ten Barriers to Business Process Re-engineering in Industry and Government

Leadership	Culture	Organization	Personnel Mgmnt
Inconsistent Managerial Commitment and buy-in	Difficulty in Identifying customers and customer-based performance measures	Absence of clear mechanisms to involve all organizations in implementation	Policies on job descriptions, training and reassignment
Focus on today's operations and crises rather than on vision	Absence of corporate plan and feedback mechanism	Mismatch between authority and responsibilities	
	Aversion to risk and change	Existence of functional and technical stovepipes	
		Nonintegration of process reengineering into basic policy and management systems	

OASD(C3I)IM/IT

INFORMATION TECHNOLOGY INITIATIVES

- ARCHITECTURE AND STANDARDS

  PROVIDE AUTOMATED INFORMATION SYSTEM DESIGN GUIDANCE, BUILDING CODE AND BUILDING STANDARDS

- SOFTWARE ENGINEERING

  PROVIDE THE MANAGEMENT NETHODS AND TOOLS TO PRODUCE HIGH QUALITY SOFTWARE, ON-TIME AND WITHIN ESTIMATED COST

OASD(C3I)IM/IT

INFORMATION TECHNOLOGY INITIATIVES

- ARCHITECTURE AND STANDARDS
  - PROBLEM: DOD INFORMATION SYSTEMS LACK LARGE-SCALE INTEROPERABILITY
  - SOLUTION: PROVIDE SINGLE SOURCE OF ARCHITECUTRE DESIGN GUIDANCE FOR AUTOMATED INFORMATION SYSTEMS, AND PROMOTE THE RAPID EVOLUTION OF STANDARDS FOR THOSE SYSTEMS
  - STATUS:
    - TECHNICAL ARCHITECTURE FRAMEWORK FOR INFORMATION MANAGEMENT (TAFIM)
    - HUMAN COMPUTER INTERFACE STYLE GUIDE
    - STANDARDS INITIATIVES

OASD(C3I)IM/IT

INFORMATION TECHNOLOGY INITIATIVES

- SOFTWARE ENGINEERING
  - PROBLEM: REDUCE THE HIGH COST AND SCHEDULE RISKS ASSOCIATED WITH HIGH QUALITY SOFTWARE SPECIFICATION, PRODUCTION AND MAINTENANCE
  - SOLUTION: PROVIDE A DISCIPLINED ENGINEERING ENVIRONMENT WITH THE MANAGEMENT METHODS AND TECHNOLOGY TOOLS TO PRODUCE HIGH QUALITY SOFTWARE ON TIME AND WITHIN ESTIMATED COST
  - STATUS:
    - INTEGRATED COMPUTER-AIDED SOFTWARE ENGINEERING (I-CASE) PROCUREMENT
    - SOFTWARE PROCESS IMPROVEMENT ACTIONS
    - SOFTWARE REUSE REPOSITORY

Congressional and GAO Interest in Migration Systems

1994 Report Language

Senate Appropriations Committee

> "In order to deomonstrate its resolve on this issue [CIM], the Committee directs the Department of Defense to identify a single military pay system as its objective system prior to the submission of the fiscal year budget request."

House Appropriations Committee

> "DoD must move carefully in eliminating informaiton systems and associated development, operations, maintenance and procurements."

1993 Report Language

Senate Appropriations Committee

> "The Committee is still concerned about the potential duplication of information systems."

House Appropriations Committee

> "The Committee believes that [FY 1993 operations and maintenance] savings can be achieved by canceling more Service redundant systems."

1991 Report Language

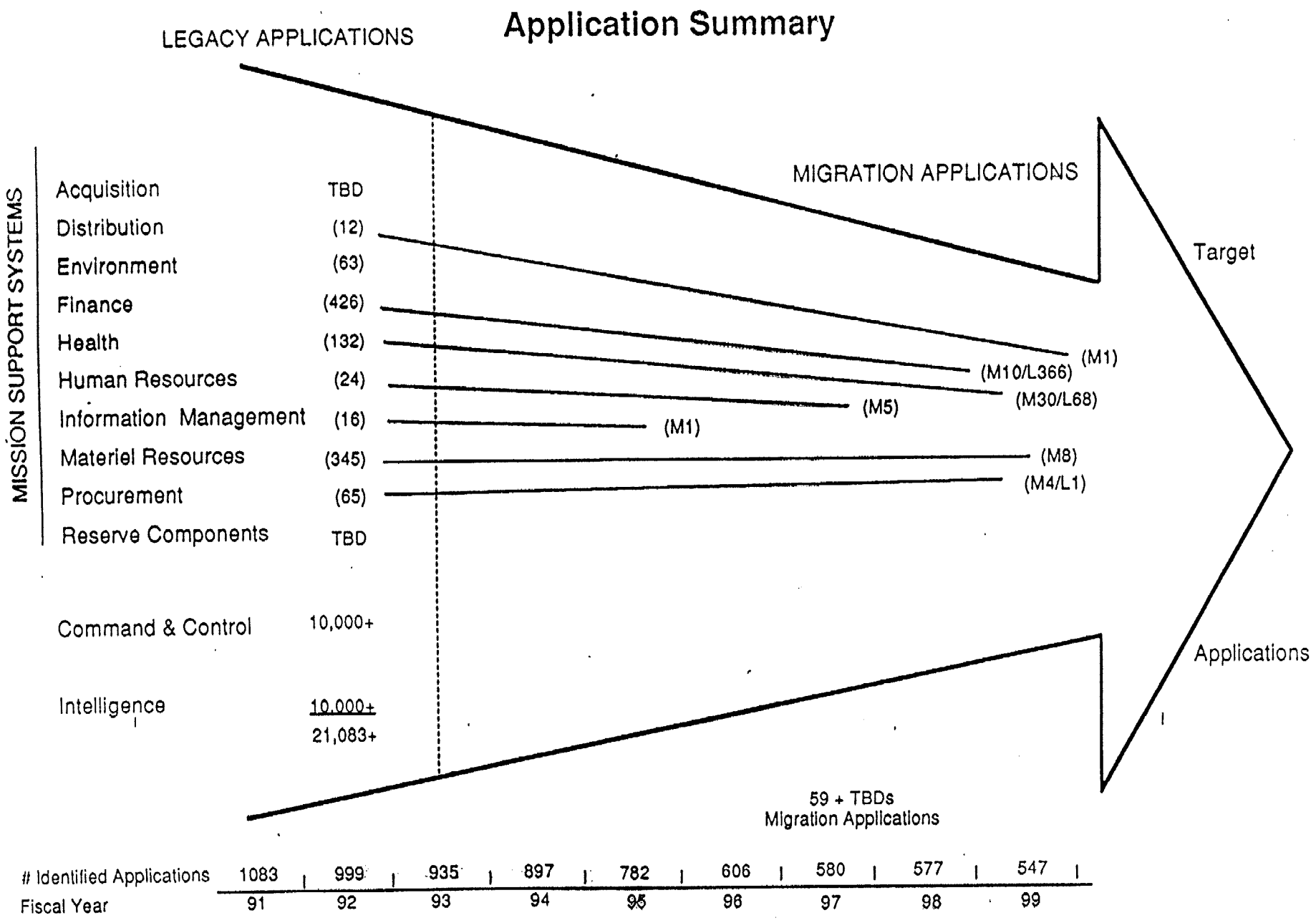
Appropriations Conference

> "The conferees strongly urge the DoD senior information resources management official to expeditiously choose interim standard systems."

GAO Report on CIM, April 1991:

> "Identifying and cataloging exisgint informaitn systems has been difficult. . .because of the large number of systems and the overlap of these systems among various functions.
>
> "To provide short-term benefits, Defense must evaluate its installed base of existing sysetms so it can make informed decisions about which systems to eliminate and which to adopt as interim systems. Defense will need to establish evaluation criteria to ensure that there is a sound basis for the systems selected."

Migration Implementation



THE DEPUTY SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
ASSISTANT SECRETARIES OF DEFENSE
COMPTROLLER
GENERAL COUNSEL
INSPECTOR GENERAL
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR OF ADMINISTRATION AND MANAGEMENT
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Accelerated Implementation of Migration Systems, Data Standards, and Process Improvement

My May 7, 1993, memorandum reiterated the full commitment of the Department of Defense (DoD) to the "... improvements, efficiencies, and productivity that are the essence of CIM." The focus of Corporate Information Management (CIM) on functional process improvement, migration systems, and data standardization has my full support. We will get on with the job. In order to offset our declining resources, we must accelerate the pace at which we define standard baseline process and data requirements, select and deploy migration systems, implement data standardization, and conduct functional process improvement reviews and assessments (business process re-engineering) within and across all functions of the Department. The acceleration of these actions is key to containing the functional costs of performing the DoD mission within our constrained budget.

The attached guidance requires that addressees expedite selection of standard migration systems and standard data as the basis for process improvement reviews and assessments. The attached guidance expands on direction previously issued by the Comptroller on June 25, 1990, and by the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) (ASD(C^3I)) on February 11, 1991. The ASD(C^3I) will work with you to ensure that overall functional and Component requirements are met and balanced as we integrate and improve systems, data, and processes across the DoD. Our near-term strategy requires:

- Selection of migration systems within six months, with follow-on DoD-wide transition to the selected systems over a period not to exceed three years.

- Complete data standardization within three years by simplifying data standardization procedures, reverse engineering data requirements in approved and proposed migration systems, and adopting standard data previously established by individual functions and Components for DoD-wide use wherever practical.

The above actions will be implemented immediately, and will be given appropriate priority in your current and future resource planning and allocation.

Ongoing information management initiatives such as functional process improvement projects, functional and technical integration analysis and planning, and software engineering methods modernization must continue on an expedited basis. However, completion of these current initiatives will not be prerequisites to implementation of the migration system and data standards acceleration strategy. Once standard DoD-wide process, system, and data baselines are established, process improvement studies will be more productive and study results can be more rapidly implemented.

It is understood that the implementation of standard migration systems may result in the loss of automated functionality by selected system users, whereas others may gain functionality. Loss of functionality will not be used as an excuse to delay migration system selection and deployment unless there is a documented adverse impact on readiness within the deployment period, or an inability to comply with the law.

The ASD(C^3I) is responsible for supplementing existing procedures with generic evaluation criteria within 30 days to be used in selecting migration systems, and ensuring the objectivity of the selection process.

I request that you personally ensure these actions are accomplished on schedule, and that you report to me on your progress by January 31, 1994.

Attachment

DEPARTMENT OF DEFENSE

STRATEGY FOR ACCELERATION OF MIGRATION SYSTEMS AND DATA STANDARDS

OBJECTIVE

- Improve the quality and utility of DoD information while reducing the annual cost of DoD operations.

STRATEGY

Migration Systems

- OSD Principal Staff Assistants, together with their Defense Component counterparts, will, by March 31, 1994, select an information system(s) for each of their respective functional areas of responsibility for designation as the standard, DoD-wide migration system.

- Concurrently, OSD Principal Staff Assistants will develop plans to transition all information technology services throughout the DoD to the selected migration systems, over a period not to exceed three years. Draft plans will be circulated to other Principal Staff Assistants and to Defense Components so that cross-functional and other implementation issues can be identified for consideration by functional and Defense Component members of the DoD Corporate Functional Integration Board, chaired by the Deputy Assistant Secretary of Defense (Information Management).

- Funding for development, modernization, or enhancement of legacy systems not selected to be migration systems will be stopped except where approved by the DoD Senior Information Management Official as absolutely essential to support DoD missions or comply with the law.

- The plan for implementing and transitioning services to the selected migration systems should simultaneously forecast a schedule, to the extent practical, for incorporating within the migration systems:

  - Improved functionality and cross-functional integration based on accelerated process improvement reviews and assessments.

  - Interoperability, technical integration, DoD standard data, and integrated databases to provide higher quality and lower cost information technology services for all users.

- Where a requirement is demonstrated to develop a follow-on, new start system to replace the standard migration system in order to meet Corporate Information Management objectives and the information management policies and principles established in DoD Directive 8000.1, OSD Principal Staff Assistants will conduct the necessary process improvement studies to develop functional requirements within the next three years.

Data Standardization

- Each DoD Principal Staff Assistant, together with their Defense Component counterparts, will develop and execute a plan in accordance with DoD Directive 8320.1 to standardize the data elements for which they are the custodian within the next three years.

- The ASD(C^3I) will, by January 31, 1994, develop simplified and streamlined processes for data standardization and data administration within the DoD.

- In the interim, the Department will continue to use the existing standard data elements within each function and Defense Component that have been developed under previous procedures. These interim standard data elements are the data standards until replaced by those prepared under DoD Directive 8320.1.

DEFINITIONS

The definitions below are intended to clarify the terms used in the DoD near-term strategy for acceleration of migration systems and data standards. Formal definitions are published in DoD directives or other publications.

Baseline Processes and Data

A baseline is something that has been formally reviewed and agreed upon, that thereafter serves as the basis for further development, and that can be changed only through formal change control procedures. Baseline processes and data establish how a function operates today (the "as is" environment), and what current functional requirements must be satisfied by the supporting migration system. Process improvement projects assess the "as is" baseline to determine what improvements should be made (the "to be" environment). Once these improvements have been implemented, they define a new process and data baseline for the next iteration of improvements.

Data Standard (also called standard data)

A data element that has been through a formal analysis (called "data standardization") to reach agreement on its name, meaning,

and characteristics, as well is its relationship to other standard data elements. Much like a common language, data standards enable processes and their supporting information systems to be integrated across functions, as well as within them, and improve the quality as well as the productivity of enterprise performance.

Data Standardization

The process of reviewing and documenting the names, meanings, and characteristics of data elements so that all users of the data have a common, shared understanding of it.

Data standardization is a critical part of the DoD Data Administration Program, managed under DoD Directive 8320.1. Data administration is the function that manages the definition and organization of the Department's data.

Function

Appropriate or assigned duties, responsibilities, and tasks that produce products or provide services. In the DoD, a functional area (e.g., personnel) is comprised of one or more functional activities (e.g., recruiting), each of which consists of one or more functional processes (e.g., interviewing candidates). The functions of the DoD are the responsibility of designated officials who exercise authority over organizations set up to accomplish their assigned functions. The structure and interrelationships among DoD functions and standard data are documented in the DoD Enterprise Model.

Individual functions within the DoD rely on other functions for products and services. In a large, complex enterprise such as the Department of Defense, functions must work together to support the mission of the enterprise; this significantly increases the importance of cross-functional programs, such as data standardization.

Functional Process Improvement (also called business process re-engineering)

Application of a structured methodology to define a function's objectives and a strategy for achieving those objectives; its "as is" and "to be" process and data environments; its current and future mission needs and end user requirements; and a program of incremental and evolutionary improvements to processes, data, and supporting migration systems that are implemented through functional, technical, and economic analysis and decision-making.

Procedures for conducting process improvement reviews and assessments in the DoD are provided in OASD(C^3I) memoranda on Interim Management Guidance on Functional Process Improvement (August 5, 1992, and January 15, 1993).

Integration

Explicit top management initiatives to ensure that ~~interdependent functions or systems operate effectively and efficiently for the overall benefit of the enterprise~~ (i.e., the DoD). This contrasts with coordination among functions or systems, which ensures non-interference, but does not provide integration.

"Integration" implies seamless, transparent operation based on a shared or commonly-derived architecture (functional or technical) and standard data. "Interoperability" implies only the ability of a function or system to exchange information or services with another, separate function or system using translators or interchange rules/standards.

Migration System

An existing automated information system (AIS), or a planned and approved AIS, that has been officially designated as the single AIS to support standard processes for a function. Other AISs, called "legacy systems," that duplicate the support services provided by the migration system are terminated, so that all future AIS development and modernization can be applied to the migration system. A migration system is designated (or selected) by the OSD Principal Staff Assistant(s) and their Defense Component counterparts whose function(s) the system supports, with the coordination of the DoD Senior Information Management Official.

Upon selection and deployment, the migration system becomes the single AIS baseline for:

- Incremental and evolutionary changes that are required to implement functional process improvements, or to execute additional responsibilities assigned to the function that the system supports.

- Technical enhancements that implement standard data and integrated databases, and that migrate the system toward an open systems environment and a standards-based architecture defined by the DoD Technical Architecture Framework for Information Management.

Requirements for selection of migration systems are identified in Chapters 6 and 7 of OASD(C^3I) memoranda on "Interim Management Guidance for Functional Process Improvement" (August 5, 1992, and January 15, 1993); these procedures should be tailored as appropriate to facilitate expeditious selection. Subsequent development and modernization of migration systems is accomplished in accordance with DoD Directive 8120.1 and DoD Instruction 8120.2.

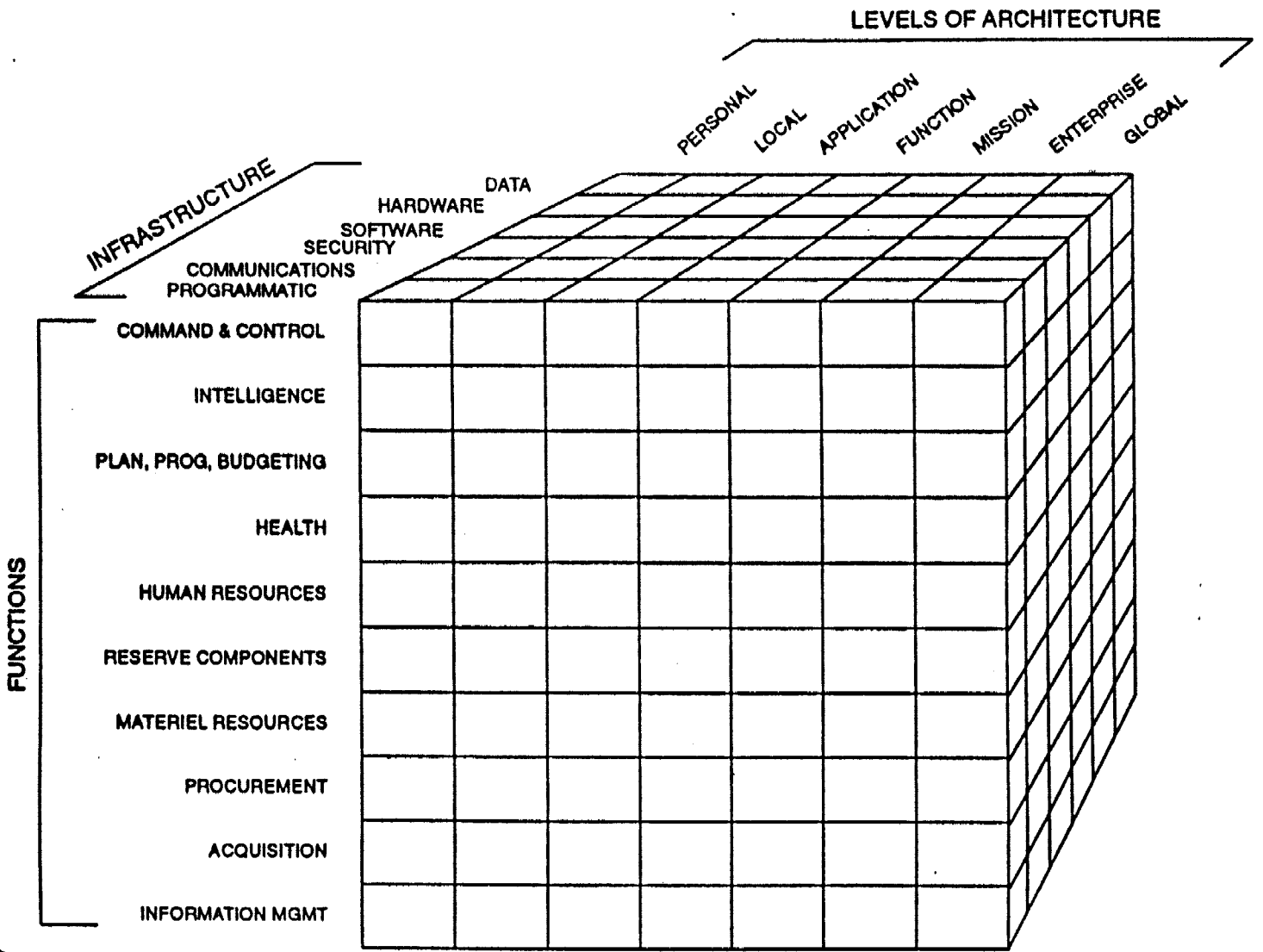
DISA
INTEGRATION MANAGEMENT
PERSPECTIVE

DR. MICHAEL MESTROVICH
DIRECTOR, CENTER FOR INTEGRATION & INTEROPERABILITY

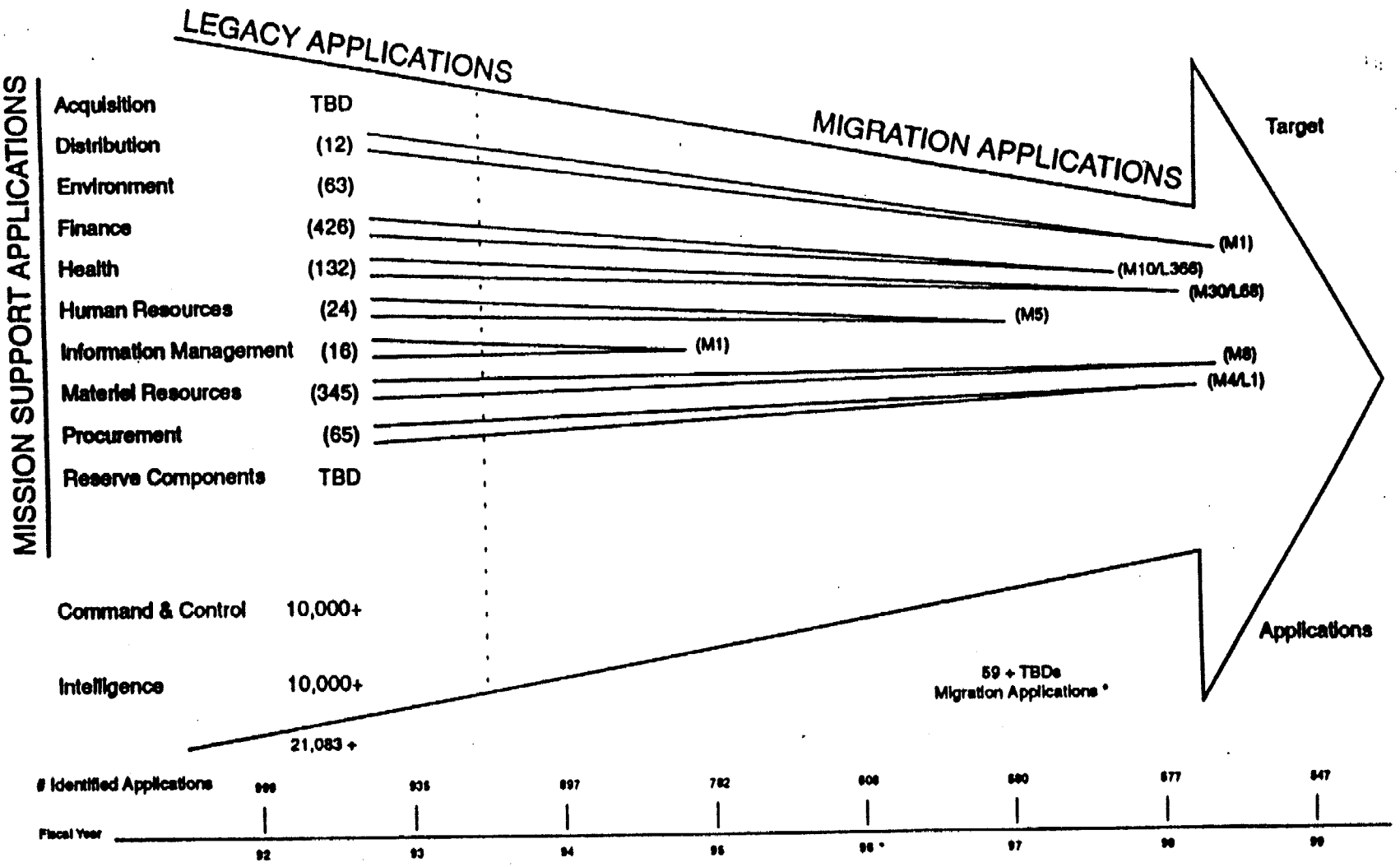
INTEGRATION: WHAT IS IT?

- An iterative activity that takes place across many processes
  - Programmatic
  - Functional
  - Data
  - Technical

ENTERPRISE INTEGRATION MODEL

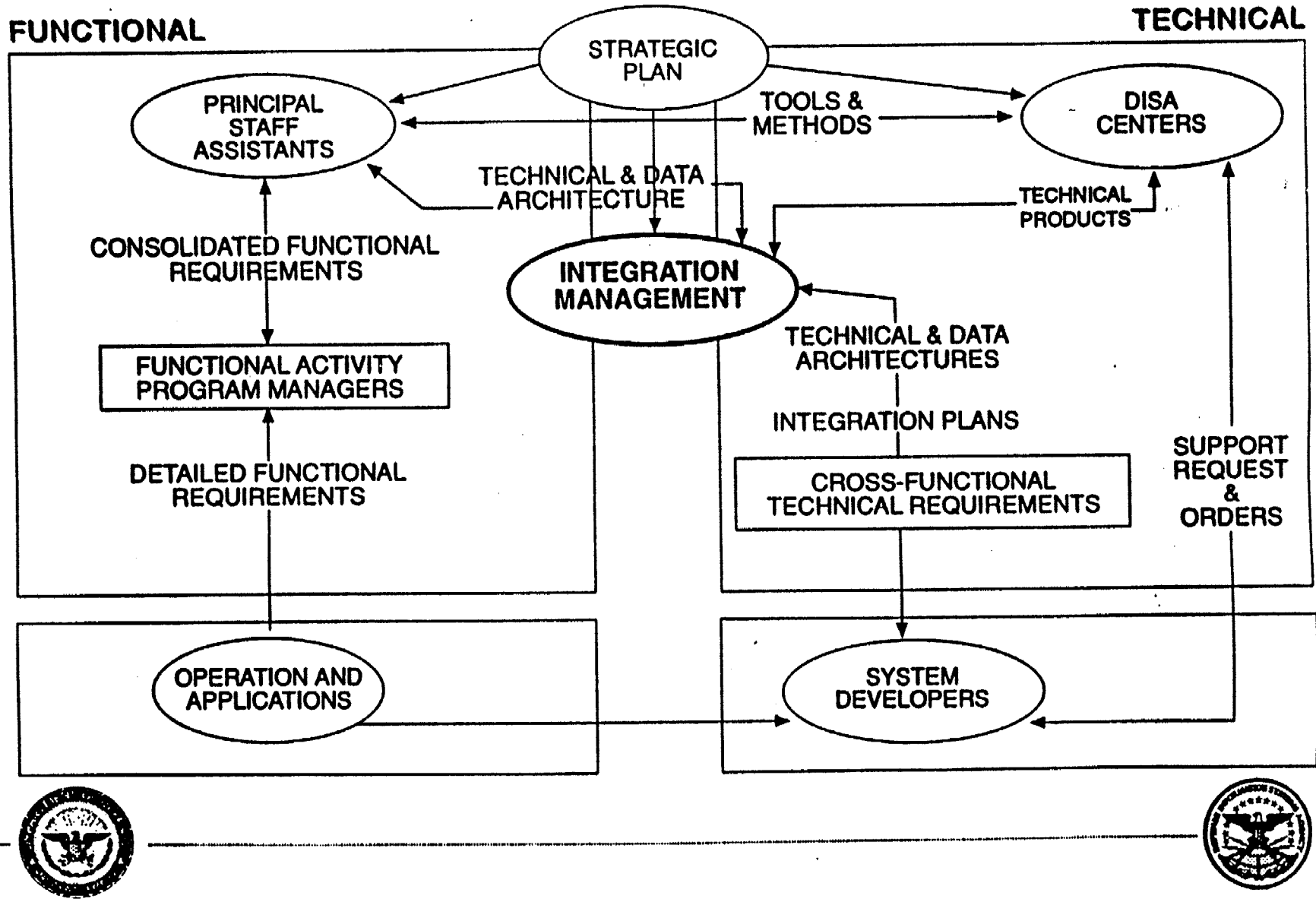


THE PROBLEM

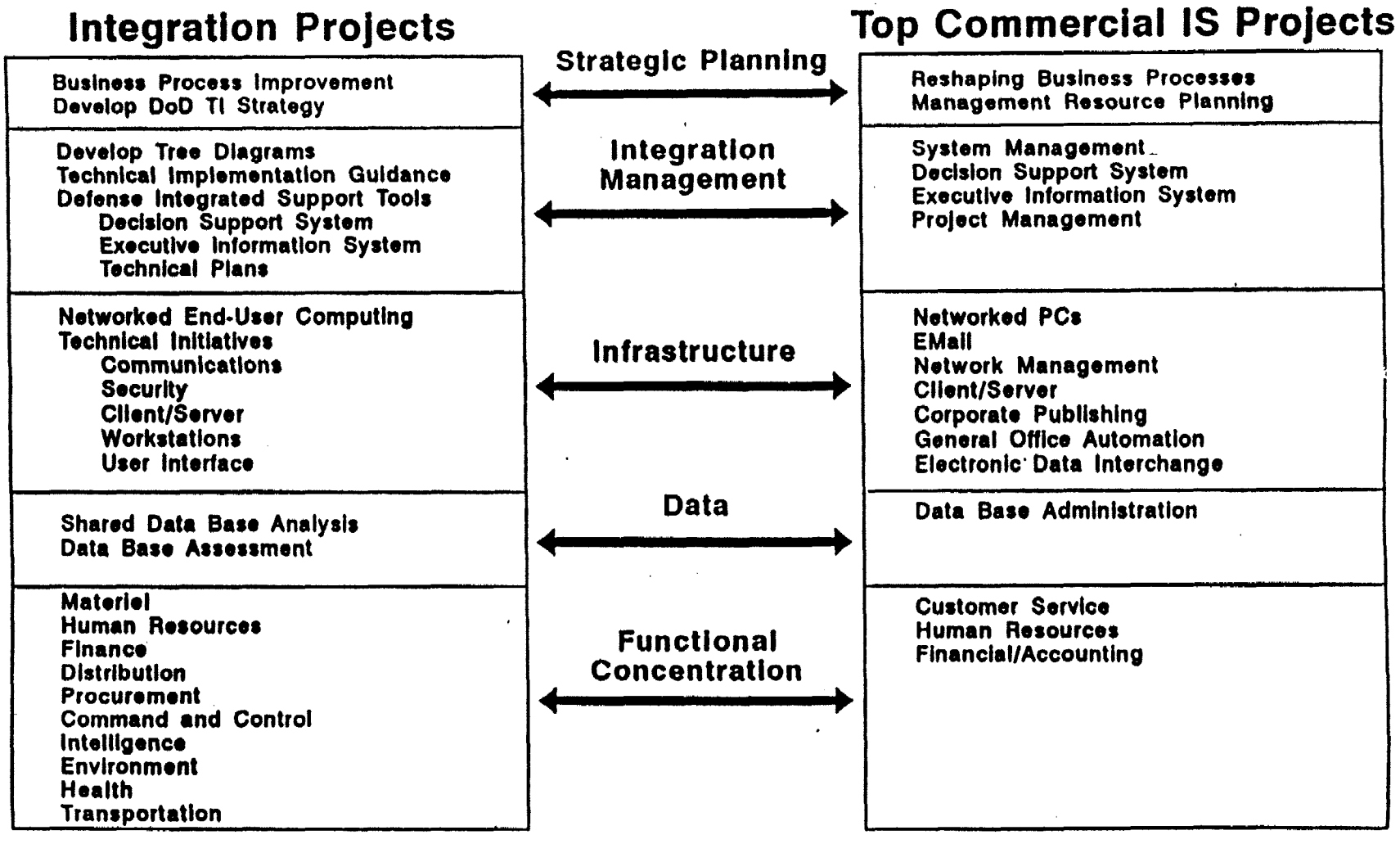

LEGACY APPLICATIONS
MIGRATION APPLICATIONS
Target
MISSION SUPPORT APPLICATIONS
Acquisition TBD
Distribution (12)
Environment (63)
Finance (426)
Health (132)
Human Resources (24)
Information Management (16)
Materiel Resources (345)
Procurement (65)
Reserve Components TBD
(M1)
(M10/L366)
(M30/L68)
(M5)
(M1)
(M6)
(M4/L1)
Command & Control 10,000+
Intelligence 10,000+
21,083 +
59 + TBDs
Migration Applications *
Applications
Identified Applications
Fiscal Year
92
93
94
95
96 *
97
98
99

INTEGRATION MANAGEMENT

CONCEPT OF OPERATIONS

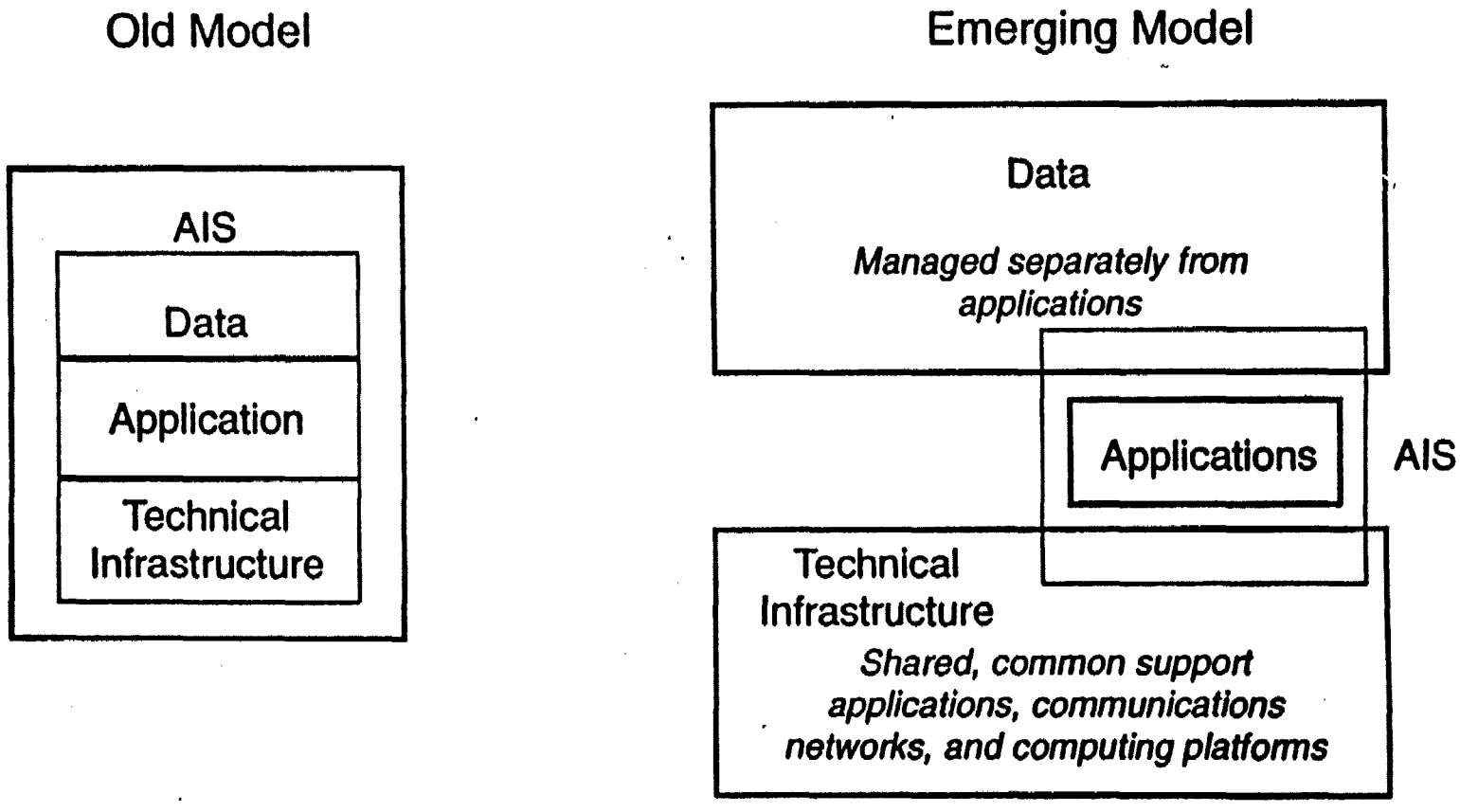


Review Commercial versus DoD Integration Projects

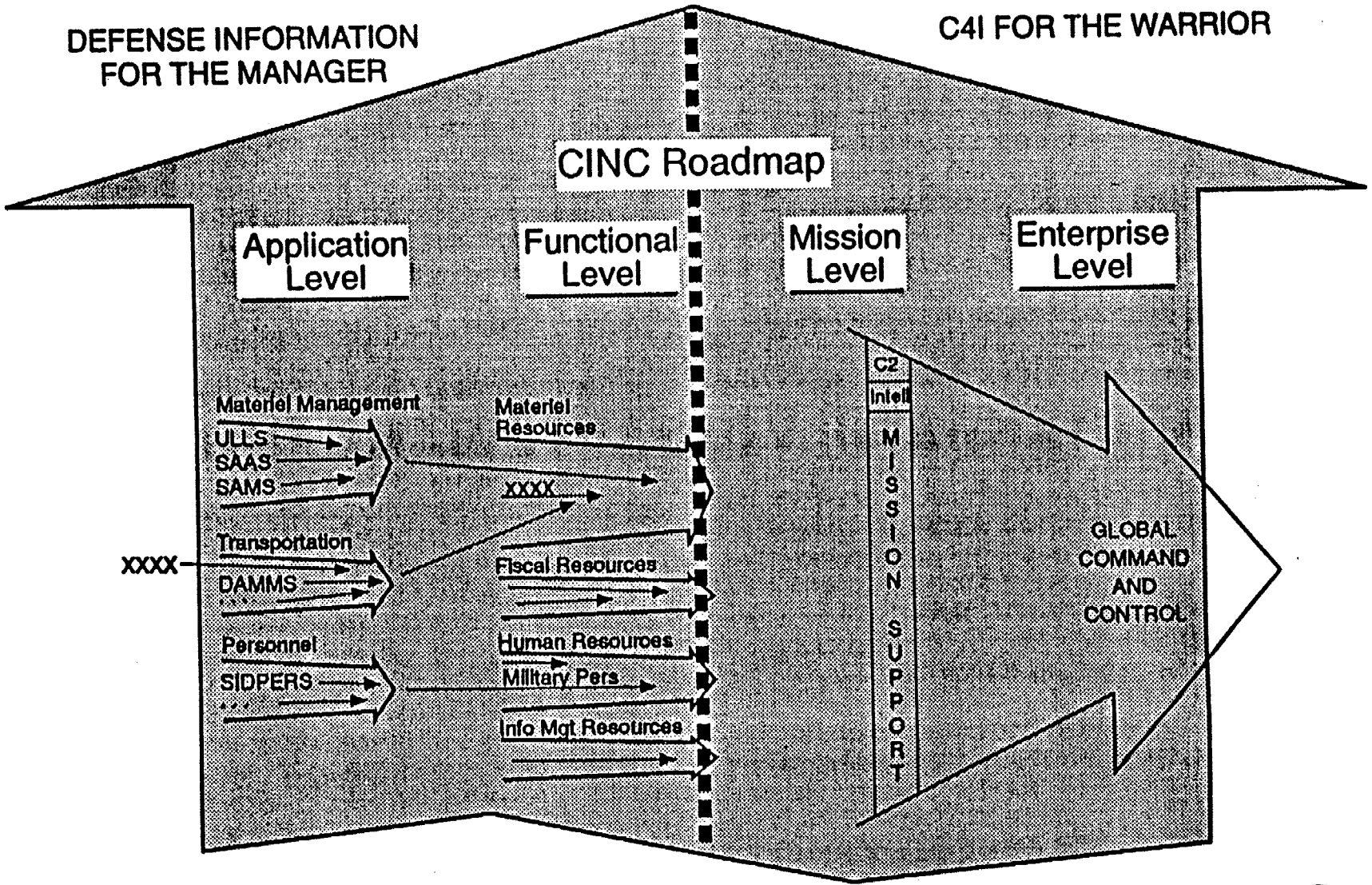


TECHNICAL MANAGEMENT PLANNING

Changing AIS Model



ROADMAP/STRATEGY INTEGRATION



Conclusions

- CIM enables same or better capabilities as Defense downsizes
- An organization and management process is in place
- Solid top management commitment and support exists
- Business re-engineering support is in place
- Data administration, technical standards, and policy programs are being implemented
- Substantial progress has been made across many functional areas
- Barriers have been identified and are being managed

APPLICATION

OF

CORPORATE INFORMATION MANAGEMENT

PRINCIPLES

TO

DEFENSE INFORMATION INFRASTRUCTURE

DEFENSE INFORMATION INFRASTRUCTURE

- DISA is the single manager of the infrastructure
  - -- Data Processing Installations (DPIs)
  - -- Communications
  - -- Central Design Activities (CDAs)
  - -- IT Acquisition
  - -- Standards
  - -- Security
  - -- IT Education and Training

DEFENSE INFORMATION INFRASTRUCTURE (DII)

RECENT DEVELOPMENTS

FURTHER ACTION ON TRANSFER OF FOLLOWING ACTIVITIES TO DISA PLACED ON HOLD:

- o PROCUREMENT ACTIVITIES & ACQUISITION MANAGEMENT ACTIVITIES
- o COMMUNICATIONS (LESS DISN CANDIDATES) & ENGINEERING ACTIVITIES
- o CENTRAL DESIGN ACTIVITIES

FOLLOWING WILL PROCEED AS PLANNED AND APPROVED:

- o CONSOLIDATION OF DATA PROCESSING INSTALLATIONS (DPIs)
- o TRANSFER OF DISN CANDIDATE COMMUNICATION NETWORK ASSETS
- o TRANSFER OF STANDARDS, SECURITY & EDUCATION ACTIVITIES

DMRD 918 FUNDING AND MANPOWER
as of FY 1993 President's Budget

FUNDING
($ IN M)

	FY94	FY95	FY96	FY97	FY98	FY99	Total
TOTAL	11,707	11,335	12,215	12,129	12,312	12,760	
GROSS SAVINGS		698	1,216	1,635	2,175	2,494	8,218
INVESTMENT		698	772	735	735	735	3,675
NET SAVINGS			444	900	1,440	1,759	4,543

MANPOWER

	FY94	FY95	FY96	FY97	FY98	FY99
TOTAL	78,695	76.600	76,468	76,079	76,063	76,064
SAVINGS		3,830	5,521	7,151	8,823	10,497
NET	78,695	72,770	70,947	68,928	67,240	65,567

RESOURCE RATIONALE

- Analogous estimating technique was selected
- Previous federal sector consolidations were only estimates
- Benchmarked with industry to obtain factors
    - 30% savings with a breakeven of 18 to 36 months
    - Based on optimal phasing
        - plan
        - realign personnel
        - centralize acquisition
        - modernize network control
        - consolidate communications and computing facilities
    - Due to complexity, size, and security needs DoD breakeven will be slower
- Four-year infrastructure and security modernization investment
- Tests of reasonableness have been ongoing and supportive

ADP SYSTEMS COST REDUCTIONS

Commercial Experience

Xerox	-81%
Texas Instrument	-54%
J. C. Penney	-76%
EDS - Champus	-73%
EDS - Eligibility	-42%
EDS - Batch Update	-74%
EDS - Batch Reports	-69%
Karastan-Bigelow	-61%
EDP Analyzer	-62%
GTE	-75%
Peat, Marwick	-65%

DMRD 918 -12%

GOALS

- IMPROVE SUPPORT TO WARFIGHTER
- ENHANCE THE DEFENSE INFORMATION INFRASTRUCTURE
- REDUCE FACILITY COSTS

DDCC PLAN

DATA CENTER SITE REDUCTIONS

- DMRD 924 CALLED FOR INTRA-AGENCY CONSOLIDATIONS
- SERVICE PLANS CALLED FOR CONSOLIDATING 194 SITES TO 59
- DMRD 918 ADDRESSES INTER-AGENCY CONSOLIDATIONS
- DOD DATA CENTER CONSOLIDATION (DDCC) PLAN WILL INITIALLY CONSOLIDATE THE 59 SITES TO 16

Megacenters

- 16 Megacenters Identified

San Antonio, TX
Mechanicsburg, PA
Oklahoma City, OK
Dayton, OH
St. Louis, MO
Ogden, UT
Rock Island, IL
San Diego, CA
Montgomery, AL
Columbus, OH
Chambersbur, PA
Warner-Robins, GA
Jacksonville, FL
Huntsville, AL
Denver, CO
Sacramento, CA

- 43 sites to be disestablished
- Workload from disestablished sited to move to the Megacenters

DDCC PLAN

STRATEGY

- TRANSITION TO MEGACENTERS
  - CREATE ENVIRONMENT TO ACHIEVE CONSOLIDATION GOALS
  - STAFFING AND MANAGEABILITY ARE CRITICAL FUNCTIONS

- MIGRATE WORKLOAD FROM LEGACY SITES TO MEGACENTERS
  - CONCENTRATE ON NOT BREAKING ANYTHING
  - ACQUISITION IS CRITICAL FUNCTION

- OPTIMIZE MEGACENTERS
  - STANDARDIZE, AUTOMATE, AND INTEGRATE
  - MAXIMIZE SERVICE ; MINIMIZE COSTS

THE DEPUTY SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

7 May 1993

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
DIRECTOR, DEFENSE RESEARCH AND ENGINEERING
ASSISTANT SECRETARIES OF DEFENSE
COMPTROLLER
GENERAL COUNSEL
INSPECTOR GENERAL
DIRECTOR, OPERATIONAL TEST AND EVALUATION
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR OF ADMINISTRATION AND MANAGEMENT
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Defense Information Infrastructure and Integrated Computer-Aided Software Engineering (I-CASE)

A number of activities are currently under way based on the Defense Management Report Decision 918, dated September 15, 1992, and the Defense Information Infrastructure Implementation Plan, dated January 14, 1993. The following is revised direction. Further action relating to the transfer of the following activities to the Defense Information Systems Agency (DISA) will be placed on hold pending further review and study.

- Procurement activities and acquisition management activities now performed by the Military Departments and Defense Agencies
- Communications (less Defense Information Systems Network (DISN) candidates) and engineering activities
- Central Design Activities

This means that activities already capitalized or under the operational control of DISA will remain in that status, but no further capitalization or transfer of operational control will take place until the review is completed. The consolidation of Data Processing Facilities directed by DMRD 918 and previous DMRD's will proceed as already planned and approved. DISN candidate communication network assets will be transferred as approved. Standards activities will also be transferred as approved.

Current DMRD 918 schedules will be revised as a result of review and study actions herein described. Transfers approved for continued implementation will be completed not later than

84207

the end of FY 1993. Actions related to DMRD 918 Stage II planning will be placed on hold pending the review and study actions herein directed. We are fully committed to the improvements, efficiencies and productivity that are the essence of CIM and DMRD 918. There will undoubtedly be some changes in the manner and methods in the implementation of DMRD 918.

The consolidation of duplicative automated systems within the various Military Departments and Defense Agencies and the selection of Migration Systems to expedite the consolidation effort will be a matter of urgency throughout the Department of Defense (DoD). Business or Functional Process Reviews and improvements will be institutionalized throughout the DoD. The Assistant Secretary of Defense (Command, Control, Communications and Intelligence) will provide the tools and assistance, where required, to enable managers to conduct the periodic reviews and assessments of their business processes.

The Integrated Computer-Aided Software Engineering program will be limited to meet the minimum obligations outlined in the Request For Proposal. We will await results from the pilot sites before deciding to proceed further or withdrawing from further procurement of I-CASE tools. Our actions will also be tempered by the commercialization action by the successful contractors and acceptance of the products in that sector.

William J. Perry

ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301-3040

June 28, 1993

COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
DIRECTOR, DEFENSE RESEARCH AND ENGINEERING
ASSISTANT SECRETARIES OF DEFENSE
COMPTROLLER
GENERAL COUNSEL
INSPECTOR GENERAL
DIRECTOR, OPERATIONAL TEST AND EVALUATION
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTOR OF ADMINISTRATION AND MANAGEMENT
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Defense Information Infrastructure

As directed by the Deputy Secretary of Defense in his May 7, 1993 memorandum, further review and study will be made of the DoD implementation of the Defense Information Infrastructure (DII) as defined in DMRD 918. However, we will not await completion of that review before proceeding with a revised implementation of DMRD 918. It has been decided, in consultation with the Deputy Secretary, that DMRD 918 activities either planned for or under operational control of DISA that were placed on hold by the Deputy Secretary of Defense memorandum of May 7, 1993, will revert as quickly as possible from the Defense Information Systems Agency (DISA) back to the Defense Components except for the following:

- Data Processing Facilities,
- Defense Information Systems Network (DISN) candidate communication network assets,
- Standards activities, and
- Security support activities.

Central Design Activities of the Army, Navy, Air Force, Marine Corps, and DLA in support of wholesale logistics systems will be realigned and assigned to the ownership and control of the Joint Logistics Systems Center (JLSC). Central Design Activities in support of the Defense Finance and Accounting Service (DFAS) will be realigned and assigned to the ownership and control of DFAS.

All DII data processing facilities previously identified for transfer to DISA that support regional or Defense-wide applications will be capitalized by DISA, except for those Navy facilities addressed by Section 9047 of the FY 1993 Defense Appropriations Act. No further action will be taken by DISA to initiate, pursue, or culminate operational control or capitalization agreements with sites covered by Section 9047 until the provisions of this Section are satisfied, superseded by other legislation, or expire. If no changes to this legislation take place prior to its expiration, the Defense Information Technology Services Organization (DITSO) will assume operational control of all Navy sites identified by DMRD 918, effective October 1, 1993, with capitalization occurring on November 1, 1993. Data centers that are on-base and exclusively support base-level operations will not be capitalized unless there is a mutually acceptable business case warranting consolidation.

The reduction of legacy systems in all functional areas to the absolute minimum is essential. We cannot realize the needed reduction in central design activities simply by transferring them. We must eliminate the systems they support. We are going to do that while preventing the continual proliferation of new systems and unique command systems. We will retain the most efficient and most productive central design activities as we reduce the number of legacy systems and migrate to redesigned, distributed, integrated, management information systems. Nothing here should be misconstrued to mean there will be no further consolidation and centralization of central design activities. It is a fact that the direction is already established. We will consolidate and centralize additional central design activities when we have reached the point where that course of action is clearly necessary or is the most effective next step.

Capitalization of communication networks, standards activities, security activities, data processing facilities by DISA, and CDAs by JLSC and DFAS should be accomplished prior to October 1, 1993, to minimize the administrative burden associated with fiscal year-end processing. Request all parties work cooperatively to accomplish these capitalization actions as soon as possible.

There are a great number of DoD professionals whose lives have been disrupted during this period of uncertainty. Please extend my sincere appreciation to these professionals for their patience, perseverance, and professionalism.

Emmett Paige, Jr.

OFFICE OF THE SECRETARY OF DEFENSE

1000 DEFENSE PENTAGON
WASHINGTON, DC 20301-1000

1 October 1993

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
DIRECTOR, DEFENSE RESEARCH AND ENGINEERING
ASSISTANT SECRETARIES OF DEFENSE
CONTROLLER
GENERAL COUNSEL
INSPECTOR GENERAL
DIRECTOR, OPERATIONAL TEST AND EVALUATION
ASSISTANTS OF THE SECRETARY OF DEFENSE
DIRECTOR OF ADMINISTRATION AND MANAGEMENT
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Logistics Central Design Activities

The Assistant Secretary of Defense (C3I) memorandum, "Defense Information Infrastructure," dated June 28, 1993, initiated action to transfer the Central Design Activities (CDAs) of the Army, Navy, Air Force, Marine Corps and the Defense Logistics Agency (DLA) to the Joint Logistics Systems Center (JLSC).

This memorandum caused an in-depth review of all aspects of logistics CDA responsibilities, organization and funding. This review, with component participation, provided an update of the status and capabilities of the logistics CDAs. The recent completed "Bottom Up Review" has identified the "right-sized" defense force structure and mandated an infrastructure downsizing commensurate with this new force structure.

The Deputy Secretary of Defense's fundamental objectives for guiding modernization of the logistics information systems infrastructure are to: reduce expenditures for legacy systems; eliminate stovepipe systems; speed deployment of migrations systems; reduce infrastructure; and rely on the private sector for logistics business development and support.

Our original direction to transfer all CDAs to JLSC is rescinded. In place of full transfer, the JLSC will identify and receive 20 to 25 personnel and skills needed to execute migration strategy. The JLSC Commander will identify the specific skills needed. Action to transfer the skills will be initiated separately. It is anticipated that transfers will be completed not later than 1 December 1993. Additional capabilities required to deliver modern systems are to be drawn from the private sector.

Stovepipe systems are too expensive to maintain in the demanding fiscal environment we face in data system modernization. We must produce results within the next 36 months if we are to modernize logistics operations on any acceptable scale. Funding is shrinking and a break from past operations is essential to success.

Services are to place all CDAs on a fee-for-service basis as part of immediate downsizing posture. The CDAs primary function will be minimal maintenance of legacy systems. The objective is to downsize the CDAs by at least 50 percent. Both the Navy and DLA have been successful in the fee-for-service approach and consequently have fully funded CDAs today. We recognize some funding problems will be experienced in the short term. This is off set because no further development and only essential maintenance is to be accomplished by the CDAs on legacy systems.

James R. Klugh
Deputy Under Secretary
of Defense (Logistics)

Emmett Paige, Jr.
Assistant Secretary
of Defense (C3I)

DoD BUDGET

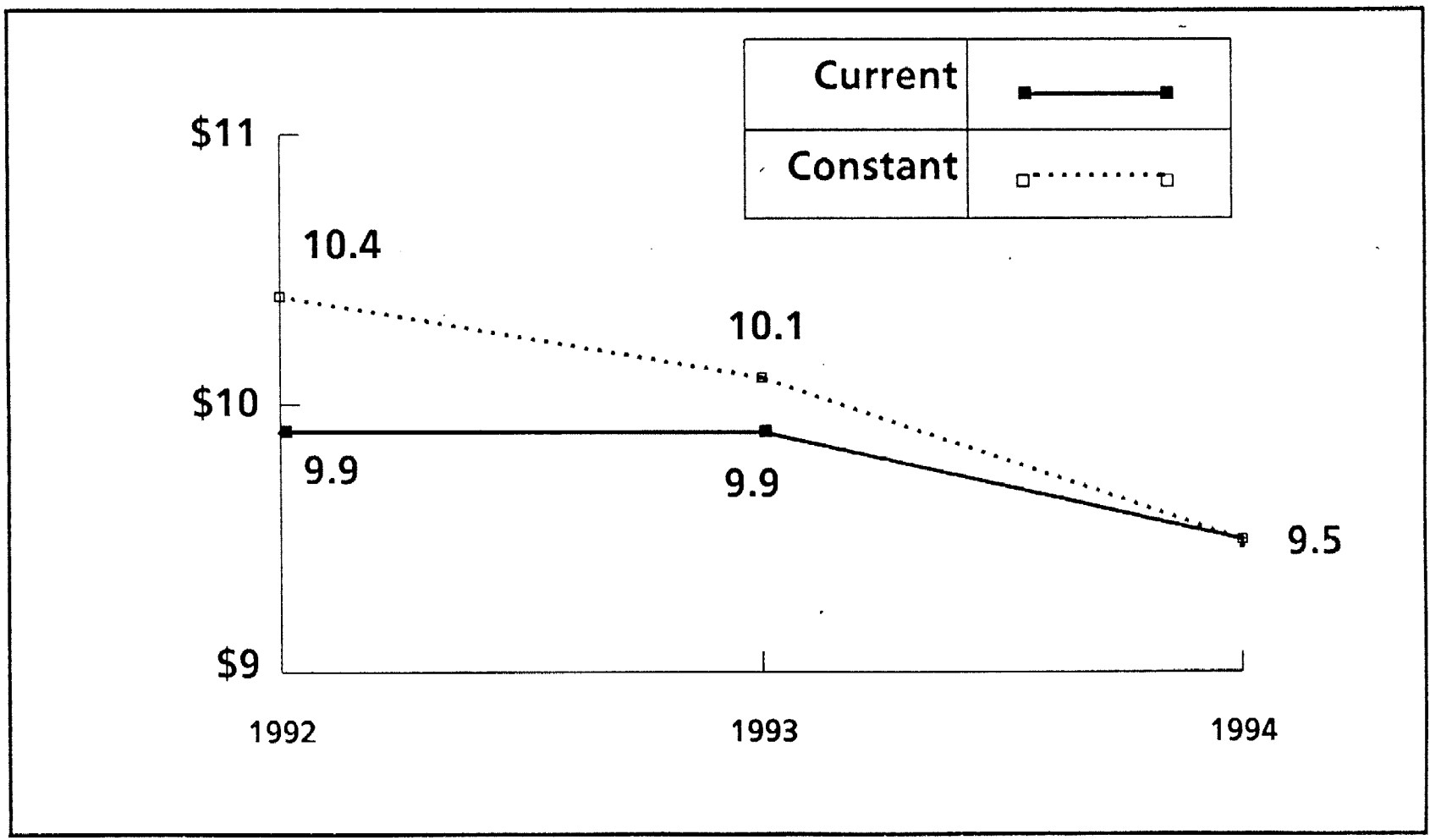
	FY 1993	FY 1994	DIFF
DEPARTMENT OF DEFENSE			
TOTAL	$258.9 B	$250.7 B	- $8.2 B
INFORMATION TECHNOLOGY			
TOTAL	$9.9 B	$9.5 B	- $0.4B

OCT. 93

DoD Information Technology Resources

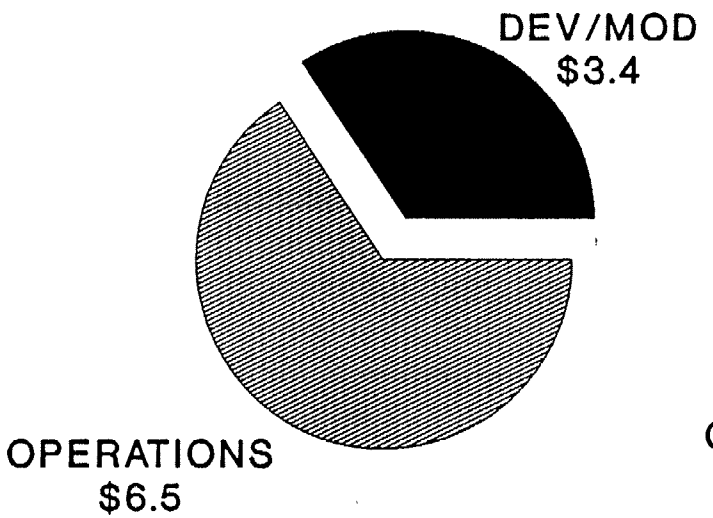
Current and Constant (1994) Dollars

($ in billions)

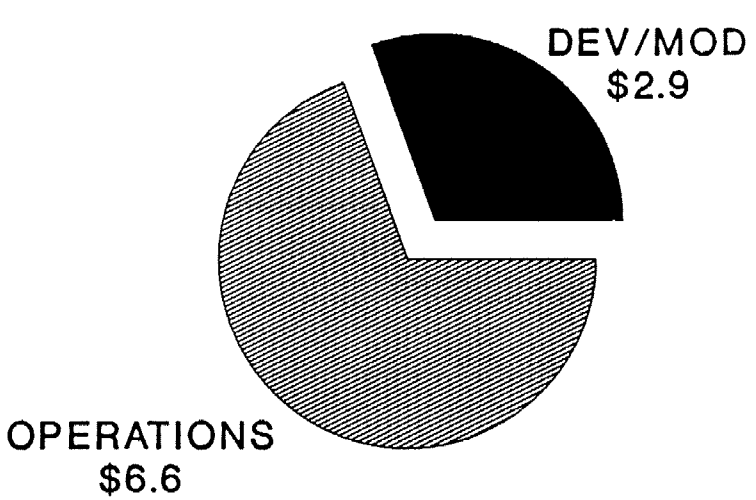


INFORMATION TECHNOLOGY (IT) BUDGET

(dollars in billions)



FY 1993



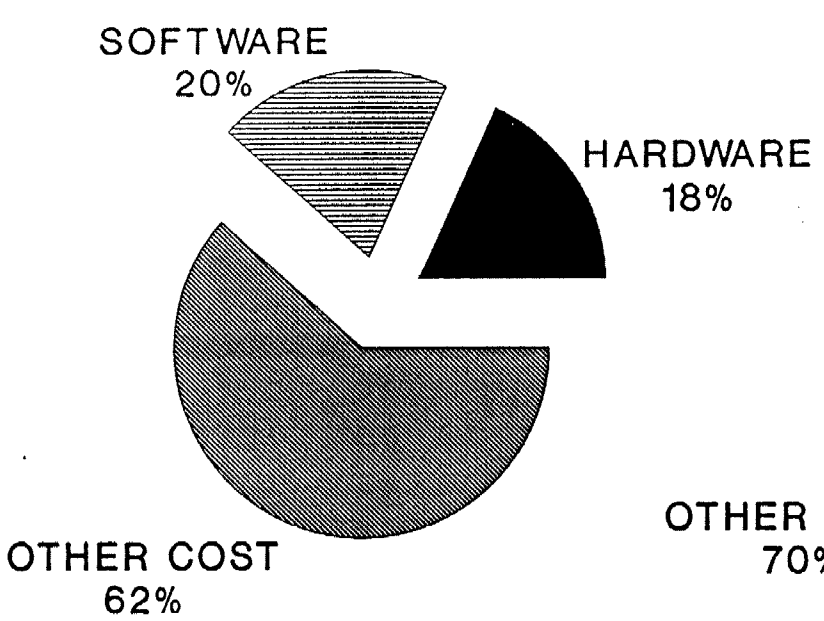
FY 1994

INFORMATION TECHNOLOGY (IT) BUDGET EXHIBIT 43 CATEGORIES ($ BILLION)

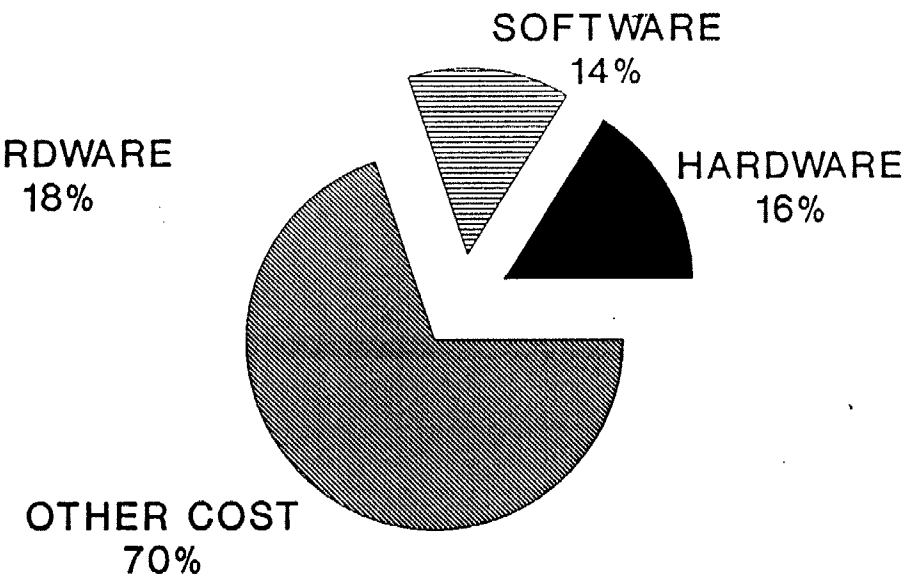
	FY 1993	FY 1994
CAPITAL INVESTMENT	$ 2.2	$ 1.8
PERSONNEL (INCL TRAVEL)	$ 2.8	$ 2.6
EQUIPMENT RENTAL/OTHER	$ 0 .6	$ 0 .7
COMMERCIAL SERVICES	$ 4.7	$ 4.7
OTHER PAYMENTS/COLLECTIONS	- $0.4	- $ 0.3
TOTAL	$ 9.9	$ 9.5

OCT. 93

INFORMATION TECHNOLOGY (IT) BUDGET



FY 1993
$ 9.9B



FY 1994
$ 9.5B

OCT. 93

Good morning —
pleased to be here
to talk about DoD
CKi - Data Admin is
one of the foundations
pillars of Corporate
Information management

MASTER Set.

DoD DATA ADMINISTRATION PROGRAM

Ms. Belkis Leong-Hong
Acting Director, The Center for Information Management
Defense Information Systems Agency
October 1993

DoD DATA ADMINISTRATION PROGRAM

Ftter

(1) This is the formal definition of data Administration as we have it in our policy

What . . .

"The responsibility for definition, organization, supervision, and protection of data within an enterprise or organization."

- DoDD 8320.1, DoD Data Administration September 26, 1991

(2) Saying it another way – Data is a corporate asset that requires the same management measures as other valuable assets –

The emphasis here is on management of the asset.

APC4 10/20/93

DoD DATA ADMINISTRATION PROGRAM

Let me explore with you what would happen if we did not have Accurate Timely, Shareable Data:

PITFALLS OF POOR DATA

We wouldn't be able to

CAN'T MAKE GOOD DECISIONS BECAUSE OF:

- Bad Data
- Conflicting Data
- Obsolete Data
- Missing Data
- Inability To Aggregate /Integrate Data

Clearly, it would be useless to aggregate data based on data that is of poor quality

MAKE BAD DECISIONS BECAUSE YOU:

You wouldn't have confidence in the data we are using y

- √ Don't know when or if you have a data problem
- √ Don't know how bad the problem is
- √ Can't get the info needed to solve the problem, we correct inp
- √ Information is incomplete or incorrect

& resulting would be

DoD DATA ADMINISTRATION PROGRAM

To we need good quality data –

BENEFICIARIES OF DATA ADMINISTRATION

Are two kinds

Two classes of beneficiaries:

- **DECISION MAKERS** → Get the right data to the right person at the right time – including support to our troops

  results ⟹ enhanced performance and reduced cost

  (end users: e.g., warfighter, CINCs, SecDef)

- **SYSTEMS BUILDERS**

  DA. Provides means to control data redundancy expedite information system development and maintenance and facilitate data reuse and exchange

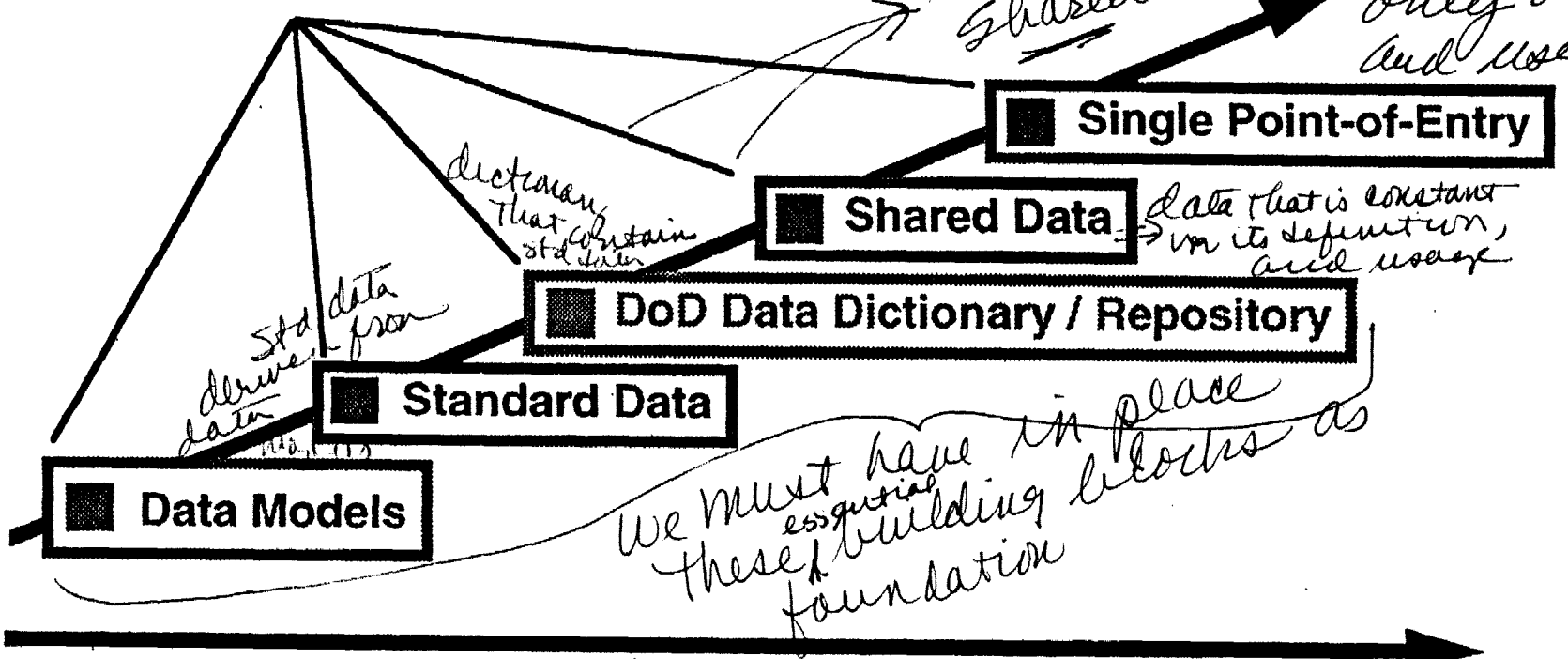
  results ⟹ cost savings & increased flexibility

Center for Information Management

DATA ADMINISTRATION

Throughout the information management process - as we migrate from a legacy information system environment to an integrated information system environment provides support

Foster and promote



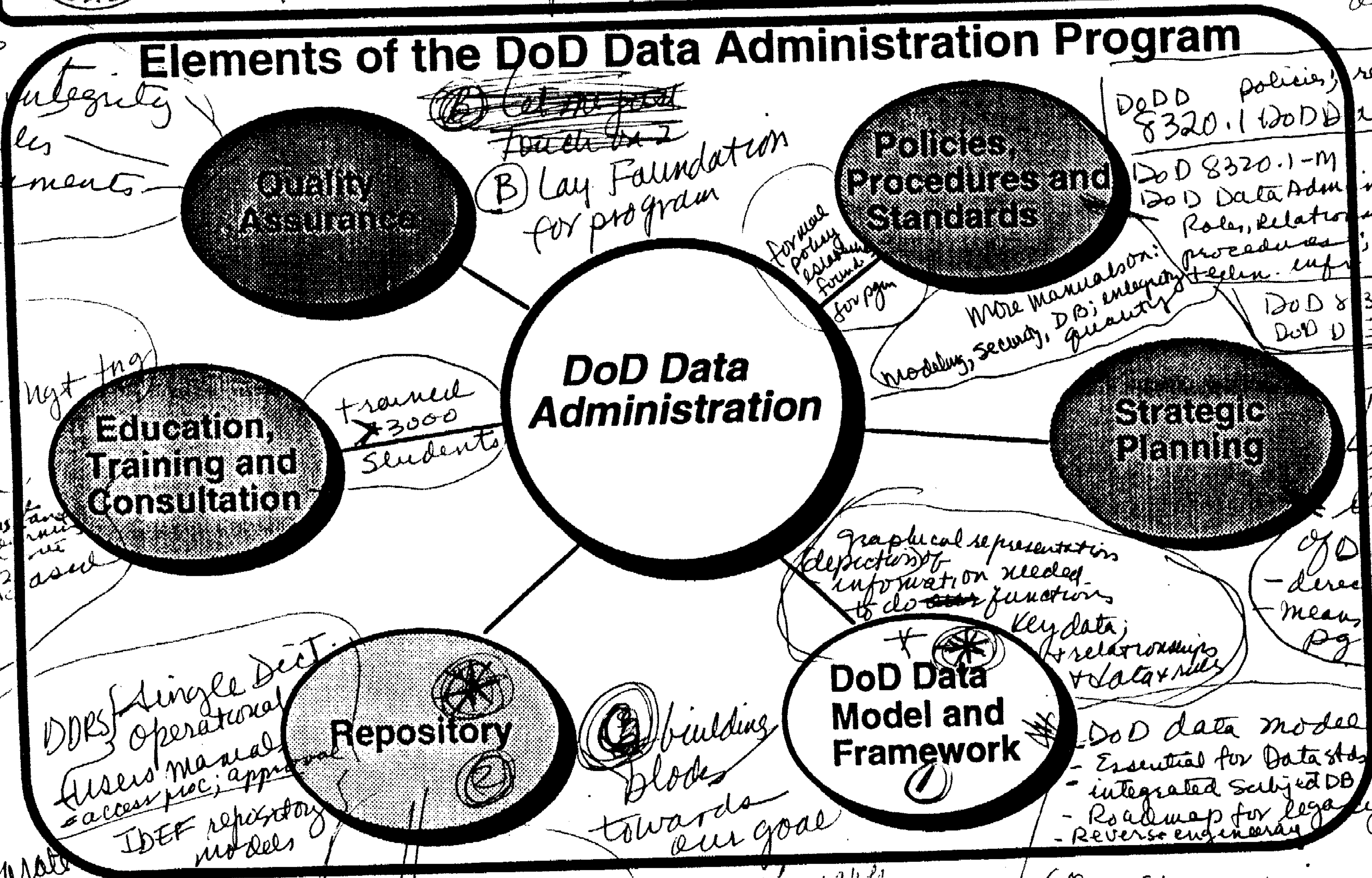
Legacy Information Systems Environment → Integrated Information Systems Environment

from →

CCBV2.9/1/93

DoD DATA ADMINISTRATION PROGRAM

These are the program elements that we have put in place to implement our concept



(A) These are the program elements I have put in place to implement the concepts in the previous chart — in the interest of time I won't go into each and everyone, but I'm prepared to go into detail if you wish

(B) Lay foundation for program

guidelines, data integrity, security, assessments

DoDD 8320.1 DoDD Data Admin policies; responsibilities
DoD 8320.1-M DoD Data Admin Procedures manual
Roles, relationships; concept of oper procedures; oper. svc. tech. info.
DoD 8320.1-M-1 DoD D stds
formal policy establish found. for pgm
More manuals on: modeling, security, DB; enterprise quantity

executive + mgt tng
trained 3000 students
classroom; remote (distance learning), computer based

8 yr cycle guide implementation of DA; directions of pgm; means to assess pgm

graphical representation depiction of information needed to do functions; key data; relationships + data rules

DoD data model
- Essential for Data stds
- integrated subject DB
- Roadmap for legacy system migration
- Reverse engineering

DDRS single DoD operational; users manual; access proc; approval
IDEF repository models
separate
future — defining requirements for repository

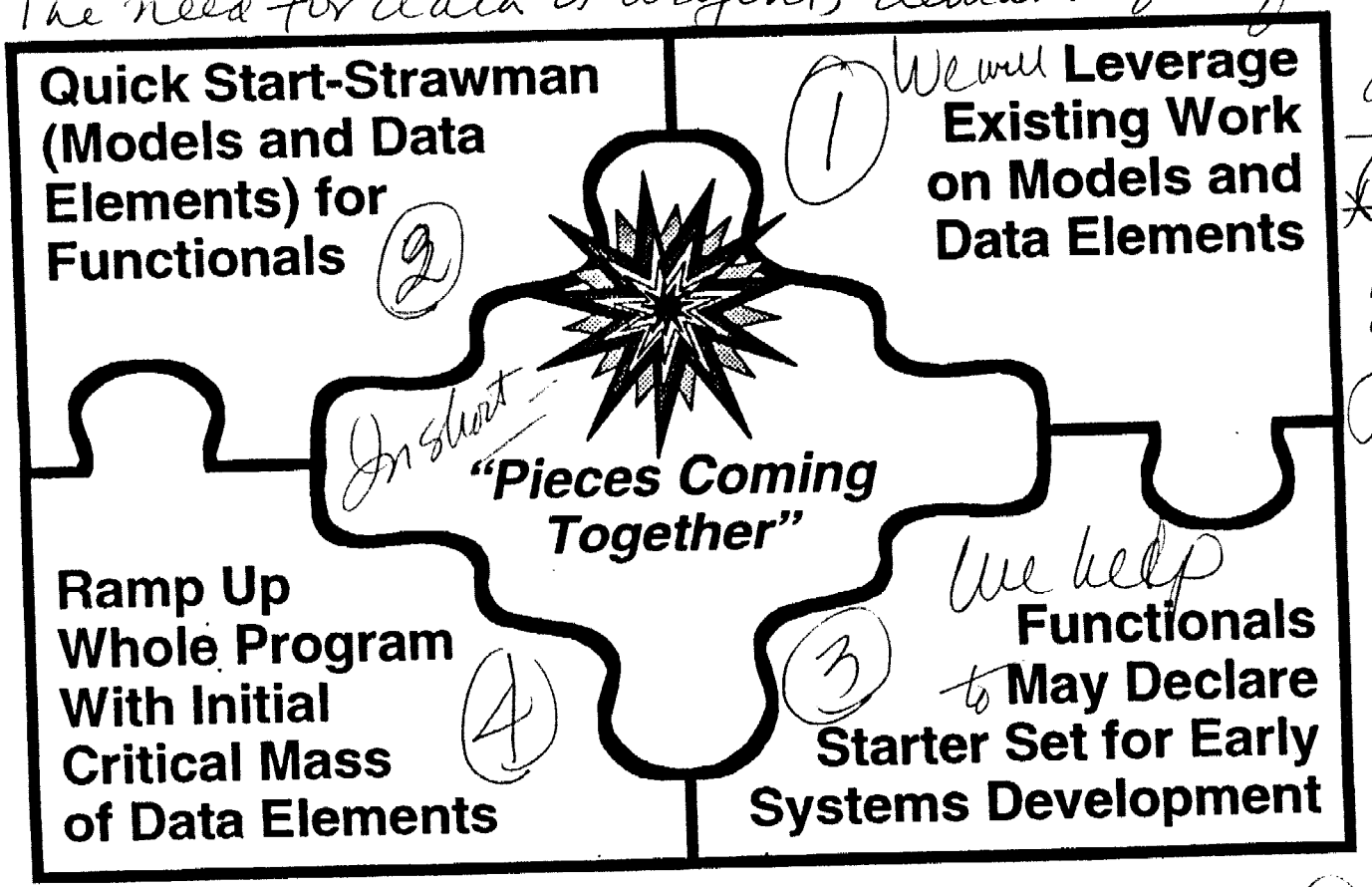
building blocks towards our goal of sharable data

(Our approach is model based — data stds)

Center for Information Management

"Pieces Coming Together"

(1) * The need for data is urgent; demand from functional mgrs & system mgrs are pressing



(2) Concerted move to accelerate program now that we have laid some of the foundational building blocks —

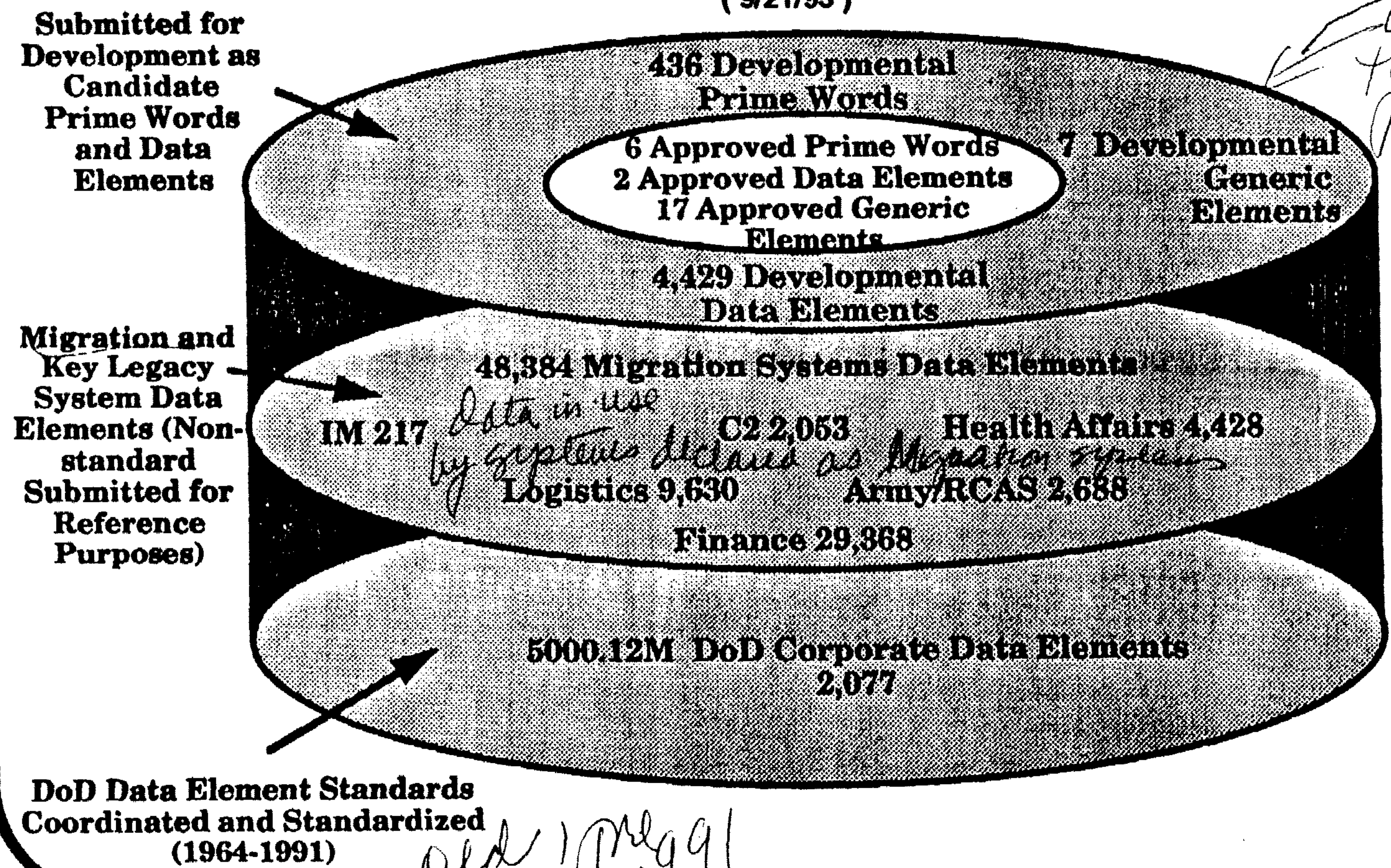
(3) we are moving a critical mass of std DES

CCBV2.9/1/93

DoD DATA ADMINISTRATION PROGRAM

Contents of the Defense Data Repository System

(9/21/93)



APC4 10/20/93

Center for Information Management

Model-based Enterprise Data in the Pipeline for 1st Half FY94

(Anticipated Data Entering the Process)

This is the data that is in the pipeline

C2	1,815
COMP, HA, LOG, IM	1,000
ARMY	700
NAVY	TBD
AIR FORCE	100
ESTIMATED INPUT - 1ST QTR FY 94	3,615
ESTIMATED INPUT - 2ND QTR FY 94	900-1,000
ESTIMATED MODEL-BASED CORPORATE DATA INPUT	4,515+

DoD DATA ADMINISTRATION PROGRAM

NEAR TERM CHALLENGES:

We are witnessing

- **Paradigm Shift In DoD IM Business**
  - **Data Administration Is Only One Component Of Change**

In DA we now have laid foundation for beginning to reap benefits

- **All Elements Of The DA Program Needed At Once**
  - **Intensive Ramp Up Required**

~~Bottom line~~ We are faced ~~still~~ with the fact that

- **Data Administration Is A "Hard Sell"**, because
  - (1) **DA Concept Is Not Intuitive**
  - (2) **Payback Is Not Immediate**
  - (3) **Significant Initial Investment Is Required**

But the bottom line is that we cannot afford to NOT do Data Admin, because without quality data that is consistent, timely, accurate, and shareable, we cannot achieve efficiencies, savings + interoperability in our business.

CIM: Data Administration Issues - GAO

- A central goal of Corporate Information Management is to improve Defense operations and reduce costs through improved management of information.
  - DoD concurs with observation, but does not concur that the CIM "Process" Model needs to be applied in a strictly top-down fashion.

- Defense has not determined its corporate data requirements.
  - DoD has not fully determined all of its data requirements. Functional managers are in the process of determining their data needs. Data standardization is not something that happens all at once, and it does not happen quickly when it is done correctly.

- Data element standardization procedures are premature and ineffective.
  - DoD does not concur that these procedures are either premature or ineffective. We needed procedures to do it right and data modeling procedures are being circulated now. Regardless of how they were built, data models can be used to develop well-formed, single concept corporate data elements. We have funded and backed the IDEF Federal standard development.

- Defense Data Repository System does not support Data Administration goals.
  - DoD concurs that functional process improvement is needed for data administration, now that we have it going. We are doing a functional process improvement study. We have done a requirements analysis for the DDRS and are proceeding with a requirements validation and acquisition planning. The DDRS is needed until it can be replaced. Non concur on stopping DDRS til new one selected

Partially concur

Partially concur

a - no clear defined roles/resp
b - lack of commitment

Non concur

Partial concur